The role of the private sector in providing access to educational and employment opportunities in PNG: A case study of the Work Readiness Institute, Lihir Island, PNG

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"We leaders and people must know where we want to go before we can decide how we should get there… We Papua New Guineans are now in the driving seat. The road which we should follow ought to be marked out so that all will know the way ahead."

(National Planning Committee, 2010)

Abstract

Despite Papua New Guinea being resource rich, the country has struggled to turn these revenues into positive development results with PNG still lagging behind in all development indicators. Mining companies within the country have made efforts to contribute positively to development, and are increasingly held to account through critical evaluation and measuring effects by way of social impact assessments.

This paper seeks to look specifically at the role of the Work Ready Institute, situated within the special mining lease of Newcrest Mining Ltd., Lihir Island, New Ireland Province. The WRI has been developed by the mining company as a training and development program that provides trainees with the skills necessary to access employment opportunities available within Newcrest and is specifically aimed at young Lihirians.

The aims of this research project are, firstly, to investigate the obstacles to educational success that exist for students at the Work Ready Institute, an educational training facility administered by Lihir Gold Limited (LGL). In understanding these challenges, the second aim is to explore how the mine, the WRI, and the trainees can work together for *better educational outcomes*.

The overall context of this research project is to critically examine the education system in PNG by looking at the history of education in PNG and how this history relates to recent curriculum reforms. The research considers the available literature surrounding education in PNG as well as the extractive industries and the way in which the latter can partner with the government to improve educational outcomes in the country. This research considers these through the framework of Corporate Social Responsibility, particularly looking at the motivations of CSR within the mining industry and its influence on outcomes and sustainability of social performance initiatives.

Broadly speaking, the conclusion of this research project speaks to the need for social performance initiatives to be well considered in partnership with the very

people the project is aimed at through effective social assessment and monitoring. There needs to be a clear objective for the program, and all stakeholders need to understand the objective in order to find success. Most importantly, the outcome of the initiative needs to satisfy business objectives in order to ensure continuity and sustainability during the mine life, as social performance requires long-term investment in order to deliver effective social change. And herein lies the difficulty: placing priority on business outcomes, like social performance, while also prioritising the needs of the community. True partnerships in sustainable development are when interests of all stakeholders are met.

Acknowledgments

This research project would not be made possible without the expert knowledge, patience and understanding of my supervisor Professor Glenn Banks. I was very fortunate that he was able to take on my paper despite his busy schedule, and as a renowned academic in the area of PNG's extractive industries his insights and direction were invaluable to me. I would also like to thank Dr. Maria Borovnik for taking part in the process to gain ethics approval for my research. Lastly, I would like to thank Dr. Regina Scheyvens for coordinating the course, as well as Dr. Rochelle Stewart-Withers for helping me with the initial design of my research project back in 2017 and continued help and feedback through the presentations that she organised.

I would like to acknowledge the staff at the Work Ready Institute (and formerly at the Lihir Resource Centre) for not only helping me with my research project but for inviting me into the centre as a volunteer. I thank the staff of the WRI for assisting me to gain access to trainees and help me understand the model and plans at the WRI. Most importantly, I want to thank the interviewees who gave me their time and insights so freely.

Lastly, I would like to thank my family for supporting me through what became a long journey in a particularly challenging year.

Acronyms

CSR – Corporate Social Responsibility

FODE – Flexible Open & Distance Education

HDI – Human Development Indicator

LGL – Lihir Gold Limited

LMALA – Lihir Mine and Landholders Association

LLG – Lihir Local Government

NML – Newcrest Mining Ltd.

PNG – Papua New Guinea

LRC – Lihir Resource Centre

WRI – Work Ready Institute

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1 Background to the Research

1.1 Background to this Research

This research focuses on the Work Ready Institute, an educational centre funded and run by Newcrest Mining Ltd. (hereafter, NML) and located on Lihir Island, New Ireland Province at the site of a large-scale gold mine. The aim of the Work Ready program is to provide opportunities for local talents that can be recruited locally to contribute significantly in different disciplines at Newcrest – Lihir. The Work Ready Institute (hereafter, WRI) program aims to be a feeder system to provide Newcrest – Lihir with local trainees that will have acquired essential and highly valued employability skills. This program is part of a wider development of career pathways at NML, and represents just one pathway to employment, in particular a pathway for High School graduates who have not gone on to further formal studies (see Figure 1 below). Potential trainees are engaged in structured classroom training and job placement work experience. The training is focused on literacy and numeracy skills, communication skills, essential work ready skills, computer skills and safety skills as required by Newcrest. The Work Ready program runs for 13 weeks, with 4 weeks of onsite work experience included in this total. Upon successful completion of the 13 weeks program, the trainees may be considered for the 12 months traineeship within NML departments. Potential trainees will collaborate, learn from one another and attend structured classroom training and job placement work experience.

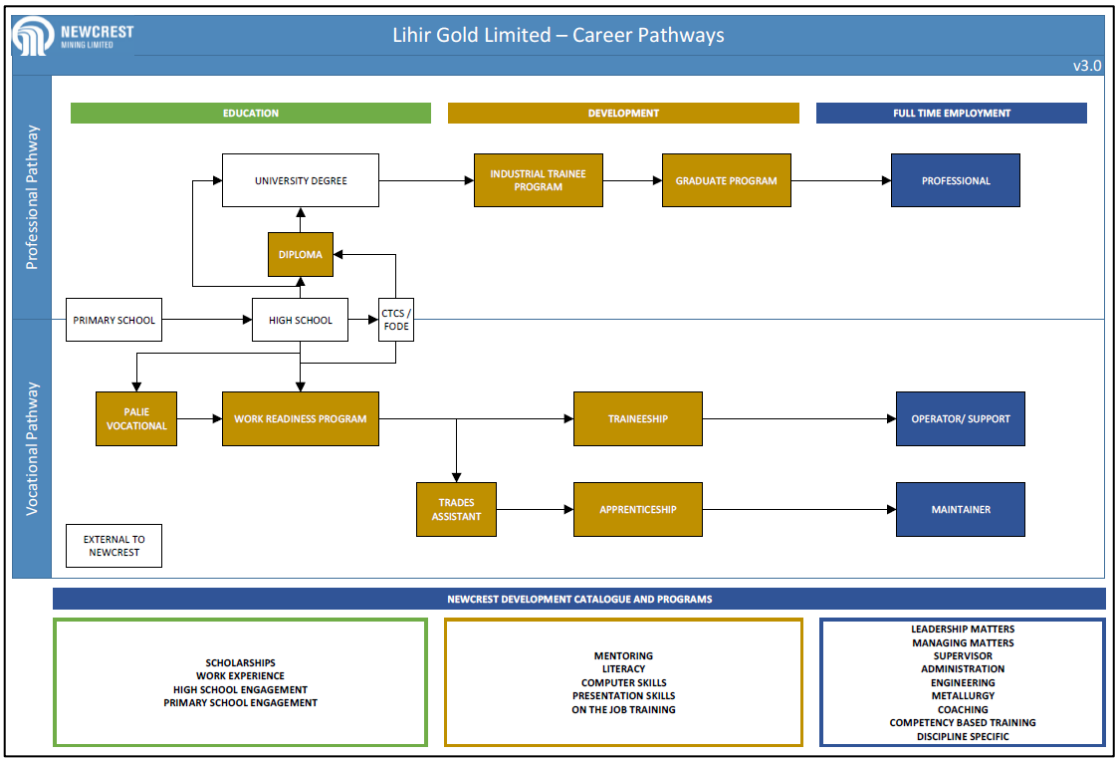

Figure 1 Career pathway. (Newcrest Mining Ltd.)

This research focuses on the potential for the mining sector to have a positive impact on the education system in PNG through Corporate Social Responsibility and public private partnerships. Education is universally accepted as fundamental to development and growth and can contribute positively to social and economic development (Vare & Scott, 2007). Access to educational opportunities stimulates social capital, local economies and can increase access to resources. Education allows people to live with dignity, participate in development and live quality lives to their full capacity (Miles & Singal, 2010). In PNG, the education system has undergone a curriculum overhaul whereby greater focus has been placed on creating an inclusive curriculum that meets the needs of a diverse population of mostly village-dwelling students (Le Fanu, 2013). However, a lack of resources to adequately support the rollout of an ambitious education program have hindered efforts to include more students in a more relevant curriculum. There is opportunity for the private sector, particularly the mining industry, to drive education programs as part of their Corporate Social Responsibility (hereafter, CSR) commitments as well as engage with the government in a public-private partnership. This begs the question,

to what extent does the mining industry in PNG have a responsibility to provide access to services, and how does this in turn impact the services the government provides, particularly in the face of future mine closures (Gilberthorpe & Banks 2012).

1.2 Rationale for this Study

A large body of research can be found relating to the Lihir Island Group as well as the social impact of mining in Papua New Guinea (Gifford, Kestler & Anand, 2010; Harvey & Bice, 2014; Imbun, 2006; Macintyre, 2003; Sing, 2015). And while there is significant research on Papua New Guinea's development difficulties, and many papers analysing the education system, there is little research on the impact the extractive industries has had on the education system in the country, with the exception of some notable research (Loluave, B., 2011). This research aims to provide links between the government education system, corporate social responsibility and possible public-private partnerships.

The Work Ready Institute was previously called the Lihir Resource Centre, and in its previous incarnation it served as a distance education facility helping young people finish their high school diplomas or improve their marks by correspondence, or Flexible Open and Distance Education (FODE). This was done in partnership with the University of Papua New Guinea. However, after several years, it became apparent that students were failing to receive certificates though they may have finished their studies successfully, due to administrative issues on both the part of the LRC, and the University. In addition, many students were failing to show up regularly for classes or submit assignments on time. Some students could only take minimal lessons per semester because of difficulties meeting fee payments. The Resource Centre was found to be replicating a government centre in Londolovit township. It was clear that very little engagement with the community had taken place to guide the direction of the Resource Centre in order to ensure that it was meeting the needs, and expectations, of the wider community. And as the majority of the students were non-Lihirians, the company was failing to meet its responsibilities to local Lihirians, instead servicing the local migrant population. Very little feedback

was sought from students attending the Resource Centre, and therefore the centre was failing to meet the needs of the students and successfully achieve its own objectives.

Through my own observations, it became clear to me that the staff simply did not have the time or tools to investigate the needs of the trainees and to use this information to help modify the program to help trainees achieve their goals. The rationale for embarking on this research is to provide feedback to the WRI staff in order to help the institute tailor its programs to ensure trainees can successfully complete their programs.

1.3 Personal interest in education in PNG and Lihir

Having spent my first 8 years living in PNG I have a long and personal relationship with the country. Both of my parents went to PNG as teachers in 1982 in the post-independence era, employed by the government to work in local schools to help mentor local teachers and improve standards of teaching. My parents initially taught in Keravat, East New Britain. My father at one of the few National High Schools in the country at that time, and at the age of one, when local volcanoes in Rabaul threatened to erupt, we moved to the capital, Port Moresby. In Port Moresby, my father taught at Port Moresby High School and my mother at Korobosea International Primary School, where my sister and I went to school.

I became a primary school teacher in New Zealand and then worked overseas. As it turned out, I met and married my husband, who is from Papua New Guinea, and I moved back to PNG. We lived at Lihir Island for four years during which time we had two children. My husband worked for Newcrest Mining Ltd. at Lihir for about 14 years in total. In our four years residential at Lihir he worked in the capacity of Environment Manager, Community Relations Manager, and Lihir Agreements Review Manager. It was through his work that I became interested in development, particularly in the ways in which the extractive industries can be a force for positive and sustainable development in PNG, social engagement, and the lessons that can be learnt from history.

1.4 Lihir Island Group and the Work Ready Institute in Context

The Lihir Island Group comprises the main island Niolam, as well as the smaller outer islands of Mahur, Masahet, Malie and Sinambiet and is located in New Ireland Province, PNG. Niolam is the host of a large-scale open pit gold mine, currently operated by Newcrest Mining Ltd.. The mine has been in production since 1995 and is one of the largest open cast gold mines in the world, producing just below one million ounces of gold in the 2018 financial year (Newcrest, 2018). The mine also has the world's largest undeveloped ore body at around 23 million ounces (Mining Technology, 2020) Approximately 4,500 people are employed at the Lihir gold mine, 90% of whom are Papua New Guinean (Newcrest, 2018).

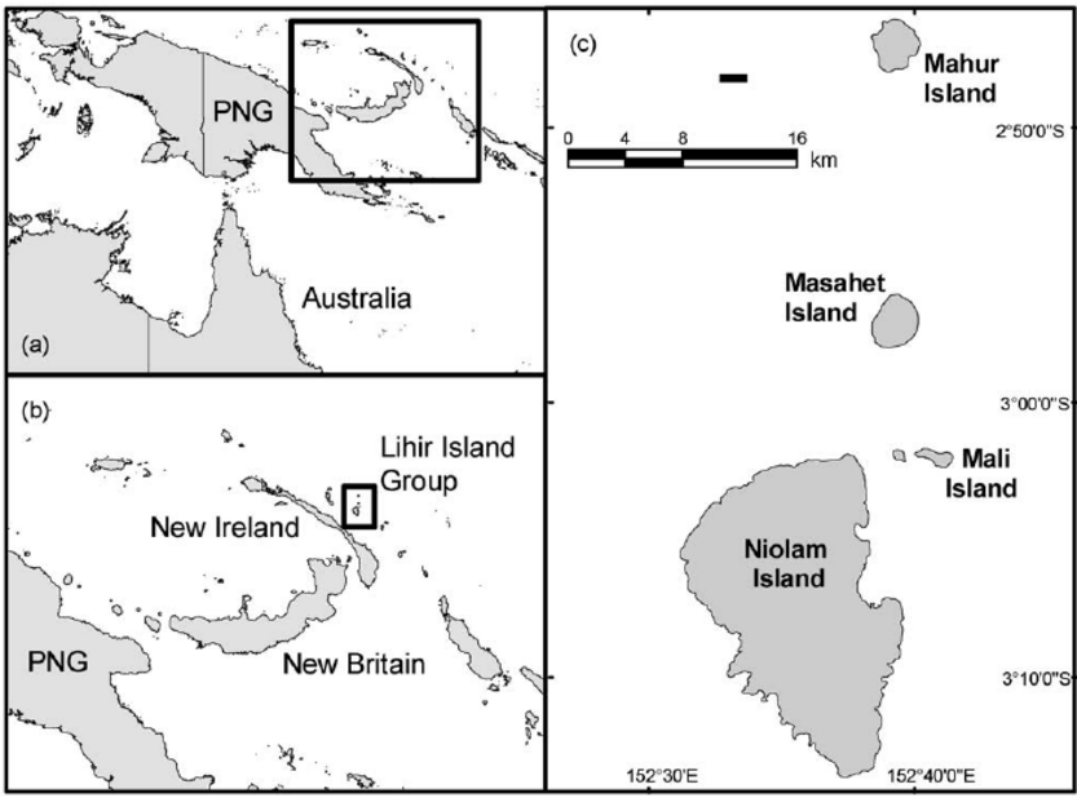

Figure 2 Location of Lihir Group of Islands (ResearchGate)

Prior to the establishment of the mine, the island group was largely isolated, with little development and the only industry was copra plantations. A Catholic mission was established in the 1920s, which provided for the spiritual, educational and

health needs of the local people, who at the time numbered roughly 6,000 (Imbun, 2006). The population has since risen to about 15,000 due to population growth, inward migration and employees of the mine. Before the mine project began, Lihir would have been considered one of the most disadvantaged and impoverished areas within New Ireland Province, due to its remoteness and isolation, and had one of the worst rates of maternal mortality in the country (Macintyre, 2004). Today, the island boasts an international airport, secondary school and one of the best medical hospitals in the country. The arrival of the mine was seen by many Lihirians as the realisation of a cargo cult which prophesised that Lihir would be "another New York" (Bainton, 2010, p.141), with ships and planes full of cargo from America. The lives of Lihirians have been greatly transformed by the mine operations, but it remains debatable whether the supposed economic benefits outweigh the damage to the social and environmental landscape.

Displacement and resettlement are common bi-products of the mining industry within the PNG context, and on Lihir Island this has also been the case (Hemer, 2016). On Lihir, the Lihir Gold Mine was established in the 1990s and two communities were directly affected by the construction of the mine: the Putputs and the Kapits. Initial relocation negotiations focused mainly on compensation and adequate housing, rather than on broader social and cultural implications (Hemer, 2016). After a series of discussions, known as the Lihir Development Forum (Bainton, 2010) and a visit by Lihirian landowners to Misima to "speak with local landowners and gain a better understanding of the transformations that Lihir would be likely to undergo" (Bainton, 2010, pg. 25), in 1995 the Integrated Benefits Package was finalised and the Special Mining Lease (SML) was signed soon after, triggering the start of the mine as we know it today.

The continued difficulties which have arisen as a result of this relocation of communities has largely been a result of a lack of foresight on generational needs, such as landholding size, education and employment opportunities. Though, as Banks, Kuir-Ayius, Kombako & Sagir (2013) point out, many of these negative social changes have occurred because of the substantial monetary flows from the mine to

landholders of mining leases. Inward migration can lead to many of the social ills associated with mining towns – alcohol, gambling and drugs to name but a few (Hemer, 2016). Likewise, as communities move towards a more cash driven economy there becomes more entrepreneurialism, opportunism and individual ambition and less emphasis on social cohesion. This is argued to be a direct result of economic flows coming from mine operations.

Any mining operation has a lifespan, and a major consideration of operating a mine is planning for its eventual close. In the case of Lihir, "livelihoods have become configured around the resources and revenue flows from the mine" (Hemer, 2016, p. 493), and there remains a strong dependency on the economic benefits the mine has provided. In strategizing for the mine closure the company, NML, is required by PNG law to develop and comply with a Mine Training and Development Plan as part of their licence to operate (Hemer, 2016). Contributions to education, training and small business development have an impact on the local economy and benefit social development. While the life-span of a mine is finite, it does tend to be long-term and thus mining companies have the potential to implement far-reaching initiatives to create lasting, meaningful change to surrounding communities. In the context of Lihir, this means extensive relationships with the local communities, landowner associations, local level government, provincial government in Kavieng as well as the national government in Port Moresby (Imbun, 2007).

"The WRI is an institute owned and operated by Newcrest-Lihir that is dedicated to providing pre-employment skills to young Lihirians seeking to enter the workforce" (Newcrest Mining Ltd., WRI brochure). The institute provides Newcrest-Lihir with potential trainees who have acquired essential and highly valued employability skills. The WRI is committed to addressing gaps in the education system and helping more Lihirian and local youths on the pathway to formal employment. The aim of the WRI is to provide opportunities for local talents that can be recruited to contribute in different disciplines within Newcrest-Lihir.

1.5 Research Aims and Questions

The aim of this research is to investigate the obstacles to educational success that exist for students at the Work Ready Institute, an educational training facility administered by LGL. In understanding these challenges, the second aim is to explore how the mine, the WRI, and the trainees can work together for better educational outcomes.

My main research questions are:

- What is the purpose and aims of the Work Ready Institute and how do students achieve success there, within the context of Lihir?
- What are the obstacles that students face in successfully completing study programs at the Work Ready Institute?
- How can the private sector effectively contribute towards sustainable development goals, in particular education and training in Lihir, PNG?

The objectives of this research on the micro level are to explore the definition of success at the WRI, from both the viewpoint of WRI staff as well as the trainees and the factors that are believed to hinder or enhance educational success at the facility. On the macro level, this research seeks to explore issues of access to education in PNG and the private sector as an education and training provider as part of corporate social responsibility, as well as looking at the benefits and drawbacks of such a private-public partnership.

1.6 Methodology

This research project focuses on human experience and potential, therefore it is important to gain an in depth understanding of the people within the context of this study (O'Day & Killeen, 2002). This research includes qualitative approaches to fieldwork, data collection and analysis. Qualitative data has been generated through interviews, in order to gain an understanding of the human experience of the WRI program. As writes Merriam & Grenier (2019, p.3), "the key to understanding qualitative research lies with the idea that meaning is socially constructed by individuals interacting with their world". A case study approach has been taken for

this research project in order to give an intensive description and analysis and contextualise the study within the broader framework of CSR, education and the resource sector in PNG (Merriam & Grenier, 2019).

As part of my research I conducted semi-structured one-to-one interviews over the course of several months. My aim was to conduct six interviews with both current and former trainees. The goal was to have half be male and half female, however due to difficulties in reaching interviewees by phone, I had to interview anyone I was able to get a connection to regardless of gender and in the end I only managed to contact five interviewees, two females and three males. The purpose of this desire for a diverse range of interviewees, particularly between the sexes, was to see whether any incidental correlations could be found in terms of access to, and obstacles to success in the WRI program. Interviews were held by long distance phone conversations. My interview questions were a combination of specific, closed questions as well as more broad, open-ended ones in order to encourage unstructured 'conversations' (O'Leary, 2017). The interview questions were devised with the hope of leading to further discussion and answers that I perhaps hadn't considered, and, as O'Leary (2017) explains, give an opportunity for the interviewee to express his or her thoughts freely. The questions were kept quite simple in light of the fact that the trainees did not always have strong English language skills. As O'Leary (2017, p. 247) writes, 'your job is to facilitate an interviewee's ability to answer – much more than it is to ask questions'.

1.7 Ethics

In any research project, care must be taken to ensure the research, and indeed the researcher, proceed with caution to ensure the integrity of all parties is intact. As O'Leary (2017, p.54) writes, your ethical responsibility as a researcher is "one that ensures that the rights and well-being of those involved with your study are protected at all times". This research report poses some distinct ethical points that I have to be aware of. In any relationship, there exists a power dynamic. In the case of this research and the context of Lihir, the mine represents a significant power. In the context of myself, as the researcher, I am a white, female. I am also the wife of a

former NML Manager, and current Newcrest Manager at the corporate office in Melbourne, which puts me in a position of power through association. This may have created a situation where the staff at the WRI were more likely to help me and provide the assistance that I required. The trainees were also potentially more likely to take part in my research because they may have believed that they had to, or were too intimidated to assert that they would rather not.

The fact that my husband is from PNG affords me the unique position of being somewhat 'different' from other white women. In my interviews and introductions I like to point out my connection to PNG as I find that it always breaks the ice and Papua New Guineans are always very happy to hear that I am 'marit lo PNG' (married to PNG). This helps to build trust and forge a personal bond. I also need to acknowledge my own biases or assumptions that I have of Lihirians as "there is an essential need to guard against the assumptions and biases inherent within our society" (O'Leary, 2017, p.58). Putting aside my own initial judgments can only be done by confronting and recognising that those prejudices exist. Language posed an added consideration and I was aware of this when conducting and analysing the interviews. Written consent forms and information sheets could reinforce power dynamics that I am trying to avoid, and so I did not use these in my data collection (Stewart-Withers, 2016).

My first action in embarking on this research was to complete the in-house ethics process with the Development Studies Department at Massey University, including a review with an independent member of staff. This research was henceforth granted 'low-risk' status by the Massey University Ethics Committee as my research did not involve a conflict of interest, children or any high-risk group.

I have a personal, long-standing relationship, with the WRI (including in its former incarnation as the LRC), having established the library as a volunteer. I am friendly with the co-ordinator at the WRI due to the many hours spent there in this capacity. Many of the students and staff were familiar with me from my regular visits.

The co-ordinator provided me with phone numbers of 20 trainees, and I initially managed to contact 6 of these who agreed to be interviewed and partake in my research, however when it came time to conduct my interviews I could only reach 5. I left it up to the co-ordinator to ask trainees if they didn't mind their phone number being given out to me. I informally explained the purpose of my study, my connection to Newcrest, and that all participation in interviews is voluntary.

During the contacting of potential interviewees, I ensured that the interviewees understand the purpose and aims of the study and gained informed consent from all participants. I explained my own connection to Newcrest, Lihir as well as the fact that participation is completely voluntary and they are welcome to pull out at any time. I repeated this upon actually conducting the interviews. All participants are informed that their anonymity will be protected and that no names will be used in my report. I am particularly conscious of trainees not wishing to harm their reputations or their potential employability. Though staff numbers at the WRI are limited, I have not published the names of WRI staff. I am also conscious of protecting the staff at the WRI and ensuring that I don't publish anything that is deemed sensitive to the company, especially that which is required to be kept confidential.

To limit potential harm to participants I have not used any names of participants, and will ensure I only use information and data, particularly that which is sensitive, that has been approved using the appropriate channels (such as Newcrest Training and Development plans which require HR Manager approval to access and use). Due to the sensitive nature of data relating to the WRI and its success in providing further opportunities for Lihirian youths, I was not given permission to use any Newcrest data or reports relating to the WRI in my research paper.

I have used one-off obtained consent for any information or data obtained. The co-ordinator at the WRI has given consent to conduct research, and where necessary consent has been sought from elsewhere within the company. I recorded the interviews conducted using my phone. After the research project is completed, I will

delete these voice recordings. I will be sharing the finished report with the interviewees and the WRI staff upon completion. While it will be difficult to share with the trainees, due to the remote nature of Lihir Island and the fact that all of the trainees live in village settings at Lihir. I will inform them, by call or text, that a copy is held at the WRI library, Kisim Save Library, and they are welcome to visit the centre to read it.

It is part of my responsibility to ensure that all participants in the study understand that data collected in this research study may be reanalysed in future research projects and may also lead to presentations either to Newcrest or elsewhere, and further papers on the topic. The final report will be shared with the participants and the staff at the WRI in order to help them to improve their programmes in future. The information gathered in this research project will primarily be used write a research project to meet the requirements for the Master of International Development, that in turn will be used to better help trainees get the most out of the program on offer at the WRI.

1.8 Selecting Interviewees

I have relied upon the co-ordinator at the WRI to provide me with phone numbers of former students at the WRI. It can be difficult to reach people on Lihir Island because of data communication challenges and lack of consistent network or electricity. The interviewees that I have used for this research project were randomly selected from the list I was provided with based purely on my ability to get in contact with those people. Selecting the interviewees was kept as random as possible, however I could not guarantee that those particular phone numbers that were shared with me were selected at random by the co-ordinator.

1.9 Overview

The design for this research report began in 2017 as part of a research design course at Massey as a part of their Postgraduate diploma in International Development when the centre was the LRC. When this Research Report was embarked upon, towards a Masters degree in International Development, the initial design had to be

modified to fit the current incarnation of the WRI. Though the program has changed, along with the name, the underlying issues such as planning, meeting the requirements of Training and Development Agrements and staff development at the centre have not. Therefore, the aims and questions are essentially the same. This research aims to explore the obstacles to success that trainees at the WRI experience, both from home and at the institute itself. The underlying issues to this research concern the extent to which mining companies have a responsibility to the local, mine affected, communities to provide education services above and beyond those provided by the government. The premise for this research is the need for more research into the relationship between the extractive industries and education development in PNG.

This research paper comprises five chapters in total. Following this introduction, chapter two explores and critically examines the relevant literature to the issues pertinent to this research. This literature review investigates the role of the private sector in providing access to educational and employment opportunities in PNG. Chapter three looks more in depth at education within the context of PNG and the resource industry, and outlines the objectives of the WRI and the definition of success held by the WRI. By examining the colonial history of PNG and its impact on today's education system, we can critically observe how this history of colonialism may be continued today through partnerships with foreign aid organizations, NGOs and the private sector. Chapter four concerns the research findings as well as the limitations to the study and Chapter five is an analysis of these research findings and feedback for the WRI and concluding comments.

2 Literature Review

2.1 Corporate Social Responsibility

Corporate Social Responsibility (hereafter, CSR) as a concept began to be championed by multinational corporations in the early 1980s (Hilson, 2012). While there is no one, clear definition of CSR, it's underlying theme remains universal: 'that there are incentives for corporations to proactively embrace environmental and community development concerns" (Hilson, 2012, p.132). CSR has emerged strongly in the extractive industries, in an attempt to legitimize the industry after many years of environmental damage and infringements on indigenous people's rights (Gilberthorpe & Banks, 2012). Mining companies are now primarily focusing CSR efforts on community development as well as environmental issues (Ranängen & Zobel, 2014). It could be argued that "it's underpinnings are almost always the same and universally recognised: the idea that there are incentives for business to proactively embrace environmental and community development concerns" (Hilson, 2012, p.132).

A key feature of CSR is that it requires a company to respond not only to shareholders, but all stakeholders, including, but not limited to, landowners, those directly affected as well as wider communities. However, some argue that CSR is largely intended to "legitimize and consolidate power" (Banerjee, 2008, p.51) of mining companies. While there are many working definitions of CSR, a key theme running though all is that CSR is voluntary by nature, which means there is potential for creating a "culture of compliance" as argued by Banerjee (2008, p.60) in relation to the motivations behind CSR. This can either be deemed as a good thing, as it provides the accountability corporations may need to honour their social responsibility obligations. However, it can also negatively imply that companies are complying to social responsibility requirements to 'tick the box' rather than create meaningful social impact.

As previously stated, there remains no one definition of CSR, as it is always evolving and adapting depending on the circumstance and environment in which it is applied.

CSR in the mining space functions to counteract the many significant effects large-scale mining can have on the environment and society (Kepore & Imbun, 2011). Despite the variety of definitions of CSR, four categories can be discerned: minimalist, philanthropic, encompassing and social activist (Ashley & Haysom, 2005). CSR practices in at the Lihir mine site would range between minimalist and philanthropic, and ideally see an eventual shift to encompassing, whereby CSR activities would look beyond the mine-affected communities and become part of the corporate culture of the company (Ashley & Haysom, 2005).

The industry that has spearheaded the CSR movement, particularly in developing countries, has been the mining, oil and gas sectors (Hilson, 2012). As industries "without a face" (Hilson, 2012, p.133), it's unclear where CSR fits into their operations and business models, without the need for them to appeal to customers or the public. The pressure to embrace CSR tends to be higher in the mining industry as mines tend to be exclusively land based and come into contact with groups and communities, and they historically have created indigenous land issues (Hilson, 2012). There are also growing societal demands that more of the profits from mining should be funnelled into community development projects, improved services and infrastructure for surrounding populations (Esteves & Vanclay, 2009). However, as Owen & Kemp (2012) argue, these are largely commitments that look good on paper, but it is not always clear how these are applied in real-world contexts. 'Capacity building' and 'business development' are popular terms, that don't always have a lot of practical relevance in the lives of locals who are looking for tangible improvements in the short term.

There has been much criticism of CSR activities within the resource sector, most of it focused on the duplicity of mining companies: applying policy and effort towards programmes while producing only limited development benefits (Frederiksen, 2018). On the surface, it can appear that CSR programmes are used as a public relations tool used to make companies more attractive and appealing to consumers (McGraw & Dabski, 2010). One of the key failures of CSR has often been the lack of consultation with local communities. This "failure to 'connect'" (Hilson, 2012, p. 134)

with local populations often results in companies failing to manage community expectations. Large-scale mining projects require a lot of manpower during the building and set up stage, but once into full operation, employment drops significantly (Hilson, 2012). These projects rarely live up to the expectations of locals in terms of employment and economic development. Through CSR activities as well as agreements, and a commitment to attaining sustainable goals it is possible for large-scale mining to make a positive impact to local socioeconomic development.

CSR has become a central focus of mining companies over the past several decades, mostly due to increasing international pressure to adhere to international standards of environmental and socially responsible behaviour (Frederiksen, 2018). Mining, particularly gold mining, is known to produce significant social and environmental impacts, which in turn can create risks and hazards that threaten operations that need to be minimised or mitigated (Bainton, 2010). Companies, such as Newcrest Mining Ltd., the subject of this report, are now held to account and as such must publically declare the ways in which they adhere to international standards. In the latest Newcrest Sustainability Report (Newcrest, 2018), the company outlines their commitments to safety, environment and relationships with community and government at all their operations. These commitments to sustainability are necessary to maintain social licence to operate, and this information is easily accessed online.

The public image of a mining company, particularly in this age of information, is hugely important, attesting to the phrase ‘knowledge is power’. We live in a digital age where even an average young person from a village in PNG can have a phone and access to the internet. This easy and prolific access to information has helped local people to become powerful. Mining companies now have greater pressure to carefully manage their standards in relation to safety, environment, community and government relations. As argues Frederiksen (2018, p.499), “Reputation… is central to the survival of mining companies. Due to the increasingly globalised world, information regarding companies is easily shared and consumed. Companies have little control over this flow and through the improvement in communications and

greater access to the internet, there is now greater accountability than ever before (Frederiksen, 2018).

It can be argued that partnerships between mining companies, government and stakeholders are necessary for successful community development initiatives (Renängen & Zobel, 2014). Variables to this success are "leadership, effective communication and trust, government support, employee support, interaction or engagement opportunities, and the incorporation of evaluation" (Renängen & Zobel, 2014, p.308) throughout the planning and implementation stages of an initiative. In the minds of most people in PNG, mining is still seen as a way to gain wealth rapidly and there are very high expectations of the returns locals will receive from the mining industry (Filer & McIntyre, 2006). While the mining industry undoubtedly contributes a significant amount to the economy via taxes, duties, royalties and wages, it is its investment in human capital that has left the most enduring legacy on the country.

Corporate Social Responsibility projects may be used to improve relationships with local communities in the long term. There may be a high expectation on the part of the community that a mining company will improve the livelihoods of the local community. Mining, particularly gold and copper mining, is well known to have significant negative impacts on the environment, however it can also have long-term negative social impacts. In PNG, multinational mining companies are under pressure from both the government and local communities to honour commitments that, in part, address, or compensate for, the varied impacts caused by their operations (Imbun, 2006).

Within mining companies, it has been argued that CSR is used as a way to mitigate risk by reducing conflicts and maintaining safety and security at mine sites as well as in mining-affected communities by following a conservative status quo approach (Frederiksen, 2018). An investment in a CSR programme today may mean minimising the chances of an operational shut down in the future saving the company money in the long run. It can be argued that mining-affected communities suffer from

increasing economic inequality, which in turn leads to social issues and dissatisfaction. The 'problem of social disintegration' in relation to the mining industry in PNG, argues Filer (1990), is one that mining companies and government agencies are aware of and do have strategies for dealing with. This usually involves 'community liaison' programmes, which are specifically set up to deal with the impact of mining operations on local communities, largely recognised to be partly negative (Filer, 1990). In developing initiatives to actively address these issues of inequality, mining companies can ensure greater local stability and in turn, ensure more uninterrupted production.

In order to contribute to sustainable development, Hilson (2012, p.134) argues that mining companies need to take a more 'holistic' approach. Traditionally, mining has been very focused on business risk assessments, and managing community development through 'needs' (Owen & Kemp, 2012, p.391) assessments. By engaging in needs based assessments, mining companies can inadvertently contribute to a cycle of psychological dependency, whereby communities are seen as victims and companies the perpetrators. By engaging in more constructive co-operation there is potential for working on a more collaborative basis (Owen & Kemp, 2012). Key to this is applying analytical frames with a more critical eye, understanding that Western approaches and discourses can distort the process in a non-Western contextual setting (Banks, Kuir-Ayius, Kombako & Sagir, 2013). While there are many criticisms of CSR, it can be argued that CSR programmes are most effective when the CSR activities are strategically aligned with the strategies of the business and designed to hold long-term value for both the business and the community (McGraw & Dabski, 2010).

2.2 Rights-Based Perspective

While this research is focused primarily on Corporate Social Responsibility, we can also look at this issue through a rights based approach lens, by arguing that it is a basic human right to have access to an education. Human rights ideals have become central to the contemporary development and international political discourse (Ife, 2008). A rights-based approach to development "encourages a redefinition of the

nature of the problem and the aims of the development enterprise into claims, duties and mechanisms that can promote respect and adjucate the violation of rights" (Uvin, 2007). This focus on state policy means a move from needs to rights and implies an increased focus on accountability and duty (Ife, 2008). In the case of education in Lihir, this can be seen as both accountability by the government, for whom direct responsibility for education services lies, and the mining company who have more contractual obligations to support these efforts through localisation programs and mine development contracts. Companies that seek to promote human rights outcomes have the opportunity to first start internally by ensuring that their internal workforce and hiring procedures are inclusive, transparent and accountable (Uvin, 2007).

The enduring problem with any rights-based approach is its subjectivity and the fact that it is based on ideology with various contradictions, therefore is difficult to define (Ife, 2008). By framing development within a human rights framework there are certain consequences for how this work is conceptualised and practiced. It can be argued that a rights-based approach is largely a product of Enlightenment thinking and has been contextualised within a Western framework (Ife, 2008). The way in which we conceptualise 'human rights' will depend greatly on cultural setting. In the Melanesian context, rights are expressed and understood communally as dividual as opposed to the rights of the individual as championed in the West (Smith, 2015). Despite these differences in understanding, it can be argued that human rights are not an exclusively Western concept. Ideas of human dignity and worth are universal as is the statement that all people deserve opportunities to have their basic needs met.

By applying a rights-based approach, it is possible to strengthen development work and challenge some of the related assumptions surrounding development, in particular in education (Ife, 2008). Conceptualising education through a rights-based lens has been endorsed by the organisations of the United Nations concerned with children and education such as and UNESCO (Robeyns, 2006). The Education for All (EFA) movement was a right to education model situated at the policy level. Within

the EFA framework, declarations outline the commitments that the international community created to endorse the promotion of education, as decided at a conference in Dakar in April 2000 attended by representatives of 164 countries, including PNG (Rena, 2011). Two of these agreements, pertinent to this research, were ensuring all children have access to free primary schooling by the year 2015, as well as eliminating gender disparities in primary and secondary education (UNESCO, 2003). The EFA movement has meant that education is not only seen as a good investment, something to put money into when there is some to spare, but as a fundamental priority that the government needs to provide the resources for (UNICEF, 2003). A rights-based approach to education provides citizens with a stronger basis to demand of their government, and to hold the government accountable to, their duty to provide a basic education to all (Cornwall & Nyamu-Musembi, 2004).

Papua New Guinea has approached the education of its citizens from a rights based perspective, committing to providing a basic education for all children aged 7-15 (DFAT, 2010). The country has made great strides in this aim, with enrolments rising significantly since independence in 1975. However, huge inequalities exist in the country where 85% of the population lives in rural, isolated areas (DFAT, 2010). Students living in urban areas are more likely to speak English and have more literacy resources, and therefore are more likely to score well on tests determining entrance to secondary school. Students from rural areas are discriminated against when competing with students from urban areas due to the lack of access to quality primary education (Hopkins et al, 2005). Mining leases tend to be in rural areas in the country, and these communities tend to be poor and neglected by the government without access to services. Therefore, if a rights based approach is applied, it can be argued that those living in mine affected areas have a right to educational opportunities whether it be from the mining company, government or a public-private partnership.

In the context of PNG, educational policy conceptualises education as human capital (Robeyns, 2006). Human capital theory approaches education from an economic

standpoint, considering education relevant due to its ability to create skills and through the acquisition of knowledge, which serves as an investment in the individual as an economic producer and thereby an investment in communities (Robeyns, 2006). Education is seen as an important driver to alleviate poverty and to essentially, create workers to help the country become more productive industrially. Unfortunately, there are fundamental problems with this approach, in that skills and knowledge that are not "economically instrumental" (Robeyns, 2006, p.73), such as reading poetry and studying history are not valued or promoted. There exists a common assumption in education policy literature, and that is that schools equal education (McGrath, 2010). As Rena (2010, p.7) states, "It is a universal fact that the quality of education is primarily depending upon the curricula, text books, and infrastructure in any country". A problem with conceptualising education as an economic investment is that it leads to comparisons with other development investments, such as healthcare (Robeyns, 2006). Education receives less aid than does health and reproductive health (Steer & Wathne, 2010) whose funding has increased significantly over the past decade as opposed to education, which has increased only slightly. One explanation for this is that education is difficult to measure and is a long-term investment that requires a significant commitment both financially and technically. An education initiative is never 'finished' and is highly dependent on community relationships and support and subject to politics. Therefore, to get the most return on aid money, education development is less attractive. Many donors view education as the responsibility of the government as a basic human right (Steer & Wathne, 2010). As Steer and Wathne outline, "Whilst the overall case for education investment is long established and well-documented, its acceptance by non-specialists and those in the political community in some donor countries is weak" (2010, p.477).

In the case of Lihir, the mining company has a moral responsibility based on the right to education, as well as a legal responsibility as per the Mine Development Contract to develop and train local people to participate in future employment in the mining industry. Through development of the WRI, Newcrest is investing in the training and

development of young people and providing them with the resources necessary to go on to higher education and opportunities to secure employment in the mining industry or elsewhere. With this in mind, it is important to explore the potential benefits of public-private partnerships (Hilson, 2012). There is huge potential for a partnership between the mining industry and government to improve education standards in PNG. However, this needs to take the form of not only financial support, but in curriculum reform processes by using the resources at their disposal in collaboration with the PNG Department of Education (Le Fanu, 2013). By approaching CSR commitments as a partnership between private and public sectors, with consultation with local people, tangible and sustainable development can be achieved particularly in the education sector.

2.3 Public Private Partnerships in education

Governments throughout the world have increasingly looked to the private sector to provide technical skills, financial assistance and infrastructure to support development initiatives (Kuriyan & Ray, 2009). These so-called Public Private Partnerships (hereafter, PPPs) are increasingly seen as an advantageous way to deliver on educational reforms and initiatives in developing countries (Srivastava & Oh, 2010). In PNG, these partnerships have largely centred around the extractive industries, particularly mining and oil & gas and initiatives to promote education as well as training and development schemes within the industry itself. Theoretically, these partnerships have the potential to bring positive change in the face of the huge social and community transformations that large-scale mining can bring (Banks, Kuir-Ayuis, Kombako & Sagir, 2013).

Worldwide, the extractive industries have largely embraced, or at least heeded to, social responsibility commitments. In the case of PNG, the mining regulatory body ensures that local communities wield quite a lot of power in relation to other countries. Agreements between the company, the state and impacted communities generally include significant shares of royalties for communities as well as an equity stake in the operation (Menzies & Harley, 2012). Despite significant revenues going to provincial governments that host large scale mines, poor service delivery remains

a common thread connecting all mining projects in PNG (Menzies & Harley, 2012). There is potential for benefits when government and industry partner together to achieve greater social and economic objectives. These partnerships in education can result in: an expansion in the reach of educational programs and initiatives; increases in capacity building in the education sector; providing financial support; using technical expertise and industry business skills to meet education goals (Thomason, 2011). CSR is one element of the private sector's role in development. By partnering with the public sector there is potential to build capacity in the local community to encourage sustainable development. The government has a significant role to play in the delivery of educational services in PNG as regulator, provider and funder. As regulator and provider, the government has a continued responsibility to develop and maintain standards to ensure the population with provided with the same standard of education across the country (Thomason, 2011). However, there may be potential to fund and expand on the government's efforts, particularly in rural areas of PNG where access to services and basic infrastructure remains low.

PPPs can also be said to potentially reduce the ability of the state to deliver and serve the public good, and the perceptions of the government by the public may be altered when PPPs mean the government is no longer delivering on basic needs. This shifting of responsibilities from the public to the private can reinforce the failure of the state to provide these services in the first place (Kuriyan & Ray, 2009). There are of course benefits to PPPs, in particular there is the extension of education access with an assumed increase in quality (Rose, 2010). These efforts, in theory, should "alleviate pressure on the public education system that still lacks capacity to provide universal basic education" (Rena, 2011, p.2).

In a study conducted by Rose (2010), PPPs in education were looked at in various countries and it was concluded that in most instances the collaboration between public and private actors was limited insomuch as the "government simply allowed the non-state actors to provide education" (Rose, 2010, p.477). The danger of PPPs in the context of education is that this lack of collaboration often equates to the lack

of a well-informed and coordinated strategy for supporting the public sector to be more involved in the long-term provision of educational services. By relying too heavily on the private sector, the government risks being unable to maintain or uphold quality in the long term. In any case, with some of the poorest sets of enrolment indicators in the world, the PNG government is in need of significant additional resources to improve the delivery of educational services throughout the country (Feeny, 2013).

2.4 The Role of Mining in PNG

The economy of PNG has largely been underpinned by large-scale mining since Independence in 1975. Ever since, the relationships between mining companies and local communities have been "ambiguous and often contentious" (Banks, et al., 2013, p.484). Understanding and analysing the impacts of mining on local communities can be difficult. There are no universal measures and access is limited by governments, and companies, who may not see it in their interest to grant open access. That said, it is clear that the social transformations set off by mining are often chaotic and far reaching (Banks, et al., 2013). As Hemer (2016, p.281) articulates, there is a need to "move beyond just economic aspects" of social change due to mining by "highlighting health consequences, and social costs, particularly through the final risk, social disarticulation". Communities affected by large-scale mining incur many positive, and negative effects, which reach far beyond simple economic principles.

Papua New Guinea is an island nation comprising over 600 islands, with half of the largest island being New Guinea. PNG is socially heterogeneous, as evidenced by the incredible number of languages spoken in the country, at last count over 850 (Reiley & Phillpot, 2002). There are 19 provincial governments, with institutional structures that promote the decentralising of power across the country from the government capital of Port Moresby. The population of PNG is estimated at around 8.5 million (World Population Review, 2019), with around 85% living in rural areas engaging in subsistence farming and cash cropping (MacIntyre, 2007). Papua New Guinea consistently performs poorly on human development indicators. The UNDP's Human

Development Indicator (HDI) places PNG in the low human development category (UNDP, 2010). Life expectancy in PNG is the lowest in the Pacific at 61.6 years, and 25 percent of children do not attend schools (UNDP, 2014). It is little wonder than most Papua New Guineans welcome mining projects and view these as a way to bring development and opportunity to their lives when the government fails to provide these opportunities and the church is limited in its capacity (Hemer, 2015).

Throughout its history, PNG has relied on the resource sector, both mining and petroleum sub-sectors. The history of mining in PNG dates back to the colonial era, however the first large-scale mine was the Panguna gold and copper mine on the island of Bougainville, which operated from 1972 to 1990 (Filer, 1998). The Misima gold mine (Milne Bay Province) operated from 1986 to 2004. PNG has 8 mines in operation at present, the largest of which are Ok Tedi gold and copper mine (Western Province) which began production in 1984; Porgera gold mine (Enga Province) in 1992; Lihir gold mine (New Ireland Province) in 1997; Hidden Valley gold mine (Morobe Province) in 2009; and Ramu nickel and cobalt mine (Madang Province) in 2013 (Filer, 2017). The other, smaller mines are Simberi, Hidden Valley, Kainantu and Edie Creek (Austrade, 2018).

Today, Papua New Guinea relies heavily on revenue earned from its natural resources, in the first instance LNG, followed by the mining sector (Eftimie, 2011), although the extractive sector contributed just 7% of government revenues in 2017 (EITI, 2019). Revenues from the extractive industries have greatly diminished, with an 80% reduction in revenues in the ten years from 2007 to 2017, despite a 150% increase in exports (Banks & Namorong, 2018). PNG is an example of a resource-rich, medium sized developing country with poor human development indicators (IMDC, 2014). The PNG mining sector is dominated by gold, silver and copper (MacIntyre, 2007), and ranks as the 14th largest gold producing country in the world (CEO World, 2018). As a major industry in PNG, mining employs over 20,000 people locally and contributes more than 20% of GDP and 80% of export revenue in the country (Austrade, 2018).

Large-scale mining can have very different effects on different communities, both in different countries and within the same country (Bainton, 2010). And while these differences can be significant, there are some broad similarities that underpin large-scale mining: dramatic changes in the social, political and cultural fabric of a society, transformations to the landscape and economic order, challenges to traditional world views and social hierarchies, to name but a few (Bainton, 2010). At the local level, these developments have a way of working themselves out in unique ways depending on the local context and geography. The local context and level of stakeholder engagement also has implications for the operation of the mine itself. In the context of PNG, mining has created inequalities throughout the country, with areas that have been affected by mining projects having greater access to economic activity. People living in these areas also have greater access to health care, education and employment opportunities (Feeny, 2005).

Large-scale mining has created enduring and long-lasting impacts on the environmental and societal landscape of Papua New Guinea. Mining projects in the country have been reported to wreak havoc on the ecologically diverse country, causing extensive damage to river systems and the land, in turn disrupting the livelihoods of entire communities (Kuo, 2019). Papua New Guinean societies are vulnerable to 'social disintegration' from the pressure of mining (Burton, 2007). Through the commoditization of land ownership and the introduction of modern capitalism, large-scale mining has effectively created a large shift in the way people understand place and ideals (Macintyre, 2018). The enduring effect has been felt strongest on the stability of communities with disproportionate opportunities between landowners and non-landowners and limited access to employment creating new social and economic hierarchies (Bainton, 2010).

In PNG, people generally have ambitions to generate wealth and enter the capitalist, cash economy so that they can avoid relying upon subsistence farming (Bainton & MacIntyre, 2013). However, the reality is that the resource sector creates very few jobs outside of the construction phase. In fact, the extractive industry can have significant negative impacts on employment in other areas of the economy (World

Bank, 2013), such as the agricultural sector. The higher wages of the extractive industry have lead to diminished effectiveness within the public sector. The paradox being that "mining companies complain about the shortage of skills at the same time as they poach people away from the education and training system, where they could help build skills" (World Bank, 2013).

Papua New Guinea is unique in the world of mining for its revenue distribution policy that recognises landowners and affected communities and requires these groups to be paid cash royalties and more (Gilberthorpe & Banks, 2012). Up to 97% of land in PNG is customary land, and community 'stakeholders' place enormous pressure on mining companies in the country to incorporate the principles of sustainability and social responsibility in their business models and operations (Kepore & Imbun, 2010). CSR activities in PNG are generally the result of "pluralistic community engagement discourse" (Kepore & Imbun, 2010, p.222) between 'stakeholders': local communities, landowners, local level government, provincial government and national government, and ultimately, the company. Therefore, pluralism is at the heart of CSR activity in PNG. At Lihir, "the mine's social performance has been influenced more by pressure from local communities than any other internal or external organisation" (Kepore & Imbun, 2010, p.222).

In Lihir, landowners have significant power to disrupt operations, and may yield this power if their demands fail to be met. A local, commonly found type of ginger plant called a *gorgor* may be place upon an object to signify a dispute and need for negotiation. Traditionally, a *gorgor* may be placed on, for example, a partially built house by another person to signify that the building is not legitimate (Hemer, 2015). In the context of the Lihir mine, a *gorgor* may be placed on a fence at the mine site, airport, on construction equipment or any other such place, as stipulated in the mine development agreement. Such disruptions to production can cost the company millions of dollars per day, and thus managing the grievances of the community is a huge concern to the company in order to maximise profits. The image of 'indigenous peoples' as simply innocent victims clearly fails to represent the true image of local stakeholders in the mining industry in PNG (Filer, 2001).

The presence of a large-scale mine can have immediate and far-reaching implications for those societies living around the operation. An influx of migrants, drawn to the area by the lure of potential employment and opportunities, can create social changes to traditional communities. This inward migration often leads 'to an increase in prostitution, drugs, teen pregnancy, alcoholism and crime' (Gifford, Kestler, & Anand 2010). At Lihir, the local people were wary of these "urban influences which they thought would accompany migration" (Bainton, 2010, p.128). During the negotiation phase, local leaders pushed for a fly-in-fly-out arrangement for workers to try and limit migration to the island to avoid these new social ills. Today, there are several thousand migrants living on the main island, lured by the economic activity surrounding the mine. Many migrants come from as far as the Highlands region. Migrants have become a convenient scapegoat for all negative social ills to be found at Lihir (Bainton, 2010). The large migrant population has also forced Lihirians to rethink the relationship between people and things, and in doing so has become "the reference point for considering individual and collective identities" (Bainton, 2010, p. 129).

There are many challenges for the PNG mining sector, and for companies operating in the country. Changes in policy at the national government level and potential changes to the Mining Act could affect future ventures. As outlined by Eftimie (2011), strategic planning for the future will be critical to sustaining positive development and community livelihoods in the future, well after the closure of mining projects.

2.5 Conclusion

From this discussion it is clear that the education system in PNG could benefit from greater partnership between the public and private sectors, in order to help PNG achieve its goal of a more inclusive curriculum. A lack of resources, funding and technical expertise has greatly hindered the rollout of education reforms. This is where the mining sector, through the lens of CSR, can have its greatest impact in helping to alleviate poverty in PNG and create lasting positive social change. As shown in the literature review, revenues from the resource sector are significant in

PNG and account for many of the social ills and disintegration of communities in places like Lihir, which have been directly affected by large scale mining. Through CSR initiatives, which aim to work in partnership with local communities, more meaningful collaborations can happen that seek to create initiatives that local people can take ownership of. Further research needs to be done into the role the private sector can play in furthering public education and how that involvement then affects the services that the government provides. Then ultimately, what happens when the company, in this case Newcrest Mining Ltd., eventually pulls out of the site? Research of this kind can help pave the way for guiding CSR in all large-scale mining projects in PNG by helping to ensure that opportunities are created to develop initiatives with a "shared value – that is, a meaningful benefit for society that is also valuable to the business" (Porter & Kramer, 2006 p.6).

3 History and Context

3.1 A Short History of PNG

Archaeological evidence suggests that humans arrived on New Guinea at least 60,000 years ago. These Melanesian people developed stone tools and agriculture. Portuguese and Spanish navigators sailing in the South Pacific entered “New Guinea” waters in the early part of the 16th century (Waiko, 2007). The Portuguese, who entered these waters first, named the modern-day island of New Guinea “Papua”, whilst the Spanish named it “New Guinea”, “New Guinea” stuck.

Papua New Guinea (PNG) comprises half of the world’s second largest island, New Guinea, with the Indonesian occupied provinces of Papua and West Papua to the West and Australia to the South. Some of the world’s most dramatic terrain can be found in PNG, from high mountains and dense jungle to the scattered islands of the Islands Region of PNG. The terrain of the country poses particular challenges to development with extreme isolation in some areas resulting in a complete lack of access to government services and infrastructure (Papoutsaki & Rooney, 2006).

PNG has the largest number of distinct languages in the world, and while figures vary slightly, it can be agreed that the figure lies above 800 (Reilly & Phillpot, 2002). This ethno linguistic heterogeneity varies greatly throughout the country with some areas being relatively homogenous while other areas are highly heterogeneous (Reilly & Phillpot, 2002). The government recognises three official languages, English, Tok Pisin and Motu. According to the National Census (2011), 49% of the country is literate in English and Tok Pisin, a language comprising of a mixture of broken English is the most widely spoken language in the country, whilst Motu is only spoken in the Southern Region of PNG. There are four main regions in modern day PNG: Southern Region, Highlands Region, Momase Region and the Islands Region.

The population of PNG, according to the 2011 census, is around 8.5 million people (National Statistical Office, 2012). Of these, 50% of the population is aged 0-14 years old, with only 2% aged 65 and over (National Statistical Office, 2012). PNG ranks

poorly on such social and economic indicators as unemployment, crime, literacy and education (Reilly & Phillpot, 2002). Since independence, the country has operated as a parliamentary democracy with its capital in Port Moresby and 19 other administrative provinces around the country.

3.2 New Ireland Province

New Ireland (Tok Pisin: Niu Ailan) or Latangai, is a large island in Papua New Guinea, approximately 7,404 km2 (2,859 sq mi) in area with around 120,000 people and made up of the two districts of Namatanai district and Kavieng district (Wikipedia – New Ireland Province, 2020). New Ireland is the most northeastern province of Papua New Guinea and is part of the Islands region. Lihir Group of Islands is one of numerous groups of islands within the province (see Figure 2). There are two main mines on New Ireland: Lihir Gold Mine on Lihir Group of Islands and Simberi Gold Mine on Tabar Group of Islands. Both mines are part of the Namatanai District, which has the largest population of the two districts.

Many of the local communities from the outer islands of Namatanai District, like the Lihir communities, historically travelled to the mainland of New Ireland for education and skills training. The Lihir mine has created a reverse effect with many New Irelanders now going to Lihir Island seeking essential services like education and health. Traditional cultural practices, such as marriages, continue to be used to establish connections between the mainland and communities on Lihir Island to access services provided as a result of mining operations, including the Work Readiness Institute.

3.3 Papua New Guinea's Geopolitical and Colonial History

The first permanent European settlements in what is today known as Papua New Guinea were in the early 1870s, when groups of traders and missionaries established posts in the country (O'Donoghue, 2009). The formal colonialization of Papua New Guinea began in 1884 when the German Empire claimed the North Coast and islands of New Guinea and the annexation of Papua, on the South Coast, to the British Empire followed soon after (Connell, 1997). The motivation and aims of the two

colonizing Empire were similar to other examples of European colonialism in the late 19th Century, in particular: economic opportunities, to gain Imperial possessions and to prevent other powers gaining strategic advantage.

The area of Papua, annexed by the British, includes the Southern Region, some parts of the Highlands and Momase regions. The areas of New Guinea, annexed by the Germans, includes the Northern part of Momase Region and the Islands Region. In Papua, there was little economic activity and the amount of money allocated to the administration of the Territory resulted in little development.

Papua, apart from Port Moresby, saw little development. To a large extent this was a function of geography and climate. Papua, without the rich volcanic soils of Islands Region saw little in the way large-scale agriculture or economic infrastructure. "The administrators of Papua had few and uncertain powers; had little money, which they obtained with difficulty from Australian colonies; and they had few staff members, some of whom were always sick or without the means of travelling to where were most needed" (Griffen, Nelson & Firth, 1979, p.13). However, in the case of the Islands Region there was considerable economic development with the establishment of large copra plantations, and the construction of roads and ports (Griffen, Nelson & Firth, 1979). There were also some plantations in Northern Momase, modern day Sepik Province, where many labourers were taken to work on plantations in the Islands Region.

Following the conclusion of WW1, under the Papua and New Guinea Act of 1949, the two regions of British Papua and German New Guinea were united for administration as the Territory of Papua and New Guinea and put under United Nations International Trusteeship (O'Donoghue, 2009). This represented the first time that the two territories were united into one administrative entity.

Between 1921 and 1942 the two regions, British Papua and German New Guinea, developed almost separately and with different levels of success. Although the territories retained their separate identities and status, they were administered

jointly by Australia from headquarters at Port Moresby (Waiko, 2007). With its plantations German New Guinea was to develop at a faster rate than British Papua.

After WW2 there was a global movement towards decolonization, this was in part driven by the growth of nationalism. In response to this movement, the Labour government in Australia showed that it was committed to improving conditions for the population in the Territories, and especially the conditions and pay of indigenous workers there, much to the disgust of the big companies who relied upon that labour in their plantations and mines (Nelson et al., 1979). Australia also soon realized that it would come under much closer scrutiny by the United Nations than it had under the League of Nations.

Prior to 1945 the British, Germans and Australians had done virtually nothing to prepare for the emergence of a united Papua and New Guinea territories. "Despite the educational endeavours of missions, 95 per cent of Papua New Guineans remained illiterate after the war" (Nelson et al., 1979, p.106). In the 1950s Australia took a gradualist approach to educating the population and improving health services, but from the mid 1960's international pressure led Australia to expedite efforts to create an educated elite, improve social conditions, boost the economy, and develop political structures in preparation for decolonization.

Just as in the 1880s when it was the strategic importance of Papua to Australia that drove political control, in the 1960s- 1970s the lack of strategic importance for Australia was seen as a strong reason to retreat from the Territory. As Australian politician Charles Barnes, said in 1968: "As to the importance of Papua New Guinea in the defence of Australia, this is doubtful" (Nelson et al., 1979, p. 140). Self-administration was achieved on December 1, 1973, and full independence from Australia on September 16, 1975 (O'Donoghue, 2009).

3.4 Colonial and Postcolonial Approaches to Education

Prior to the arrival of Europeans in the 1800s, Papua New Guineans followed an informal, tribal education that reflected skills that were important for survival. This traditional approach to education was developed over 40,000 years and included not

only survival skills, but also morality, ethics, religion and kastom practices (McLaughlin & O'Donoghue, 1996). Formal education in PNG, while distinct to local places, environments and cultures, has developed largely from the pre-colonial days of missionary schools, which were introduced in the 1870s and 1880s with the aim of converting local people to Christianity (Le Fanu, 2013). The first school in Papua New Guinea was established by the London Missionary Society with the intention of teaching locals to read scripture (Rena, 2011). Throughout the colonial period, the church continued to be the leading providers of educational services (Smith, 1987), and today the churches provide over half of PNG's educational services (Walton & Davda, 2019).

In order to understand the contemporary education policies and practice in Papua New Guinea, one must review the socio-political history of the country. When the education system came under the Australian colonial administration after WWI, universal primary education was designed to provide Papua New Guineans with practical skills, rather than academic knowledge (Johnson, 1993). This was perhaps to keep PNG citizens in more service and labour oriented jobs. This created a two-tier wage system with expatriates in the higher-earning administrative jobs, and PNG nationals were kept in menial and lower-paid positions (Johnson, 1993). Education was left largely to the Christian missions to administer for much of the colonial period (Le Fanu, 2013), with an emphasis on religious and moral instruction. The focus of the church's education programme in PNG was to provide local, male counterparts to European missionaries (Johnson, 1993) through sectarian Salvation and in thus doing so, spreading Western civilisation (McLaughlin, 2011). The priority was on keeping control of the PNG nationals, rather than developing indigenous education (O'Donoghue, 2009).

During the colonial administration era, the education system was more unified into a single, national curriculum using English language as the mode of instruction. Post-independence, there was a growing concern that the Western-style education offered little to students returning to the village on completion of their studies. As Le Fanu (2013, p.140) argues, this shift in focus meant greater promotion of "Integral

Human Development" rather than simply focusing on education for "participation in the cash economy". During this period of Australian administration, English was established as the official language of PNG and laid the foundation for the modern education system found today (Rena, 2011). Throughout the 1960s and 1970s, as the Australian administration was pressured to promote independence, the education system expanded rapidly along with the introduction of secondary schools in 1962 (Tivinarlik & Wanat, 2006). Between 1960 and 1962, the Australian colonial administration began a curriculum change that explicitly promoted elitism. In order to prepare the country for independence, Australia deemed it necessary to produce a class of educated elite to take over administrative control (Smith, 1985).

PNG gained its independence in 1975, which provided the catalyst to expand and develop the education system to develop an appropriately competent workforce to replace the expatriate's holding administrative positions (McLaughlin, 2011). However, throughout the 1970s, dissatisfaction with the centralised formal education system began to grow. With approximately 85% of the population at that time living in rural areas, an education system that focused on developing a skilled workforce in the urban areas was not addressing the needs of the majority of the population (Siegel, 1997). From this, a grassroots non-formal education movement arose in the 1980s, which made way for reforms in the 1990s that saw the vernacular language used in the first three years of schooling as the initial medium of instruction (Siegel, 1997). The implementation of educational reforms in the 1990s intended to improve educational outcomes in PNG were complicated by the diverse ethnic and cultural make-up of the population (Tivinarlik & Wanat, 2006).

3.5 Contemporary Approaches to Education and Curriculum Reform in PNG

The state of the education system in PNG is in decline. Research indicates that despite many years of educational reforms, innovations, and significant financial assistance by both the government as well as foreign donors, such as through the Tuition Free Fees policy launched in 2012 (Nunn & Nelson, 2019), there has been very minimal impact on the quality of education in the country (Yeoman, 1986; Department of Education, 2000).

Two government departments, the Department of Education and the Department of Higher Education, manage the education sector in PNG. In 2009 the education system employed 44,558 teachers with 1.43 million students in elementary, primary, secondary and vocational schools (Dfat, 2010). Great strides have been made in PNG with regards to school enrolments. However, in 2008 it was estimated that 580,000 school-aged children were out of school (Dfat, 2010). In Papua New Guinea, 24 out of 25 students who leave school each year never obtain paid employment (Hopkins et al., 2005). Therefore, the education system can be seen as one that fails to prepare students for paid employment, or else prepares too many students for a market short on paid jobs. The paradox of this is that the education system in PNG is based on a Western model, which assumes that students will be going on to higher education and eventually on to join the labour market. Hence, education is often seen as elitist in PNG, and lacking in relevance to local realities (McLaughlin, 2011). The difficulty of designing a curriculum for PNG is the need to provide a relevant and worthwhile education for those who will go no further in their education once they leave school and return to the village, while attending to the needs of those going on to higher education (O'Donoghue, 1995).

Recent curriculum reforms in PNG have focused on creating a curriculum that is inclusive and participatory in nature, "designed to meet the needs of all students, irrespective of their abilities, gender, geographic locations, cultural and language backgrounds, or their socioeconomic backgrounds" (Le Fanu, 2013, p.139). Much of the content being taught is as foreign as the language of instruction, English. This poses the first difficulty in ensuring that teachers can speak English to a level that is benefitting the students' learning, but it also questions the relevance. In order to successfully implement the new curriculum changes there needs to be adequate materials, resources, in-service training of teachers, support and internal and external moderation. Perhaps unsurprisingly, research has indicated that teachers are often unable, and sometimes unwilling, to fully implement the inclusive elements of the new curriculum (Le Fanu, 2013). This can be attributed to teachers feeling there is a lack of training, funds and a lack of basic knowledge by students to

succeed in the new system. Many teachers come from other provinces in the country, as do many of the students themselves due to internal migration making it difficult to connect teachings to local settings. As Le Fanu (2013, p.144) points out, "The social distance between schools and local communities can be attributed to the continued irrelevance of the formal education system to the lives of many rural people". There is a growing understanding that schooling needs to be culturally responsive to the communities in which they operate.

There are many obstacles to success within the basic education system in PNG. Student to teacher ratios are set at 1:40 in primary schools, though it is not uncommon to get even higher numbers, sometimes up to 60 (Hopkins, et al., 2005). There is uneven enrolment according to gender, with boys much more likely to be enrolled at school. This is due to cultural perceptions of the potential economic returns on boys' education. In a survey in 2009–2010, 52% of women and 40% of men reported primary school as the highest level of schooling attained (National Statistical Office, 2012). Evidence suggests that while economic and infrastructure development will improve overall primary school enrolment rates, more targeted policies are needed to close the gender gap in enrolments (Gibson, 2000).

A major obstacle to the success of the education system in PNG is poverty, which is responsible for everything from hunger to illness to a lack of resources in the home to pay for school fees. In 2008 it was estimated that 580,000 school-aged children were not attending school (Dfat, 2010). A 'user pays' education system resulted in high rates of children not attending school, particularly in the more rural, highland regions (Kidu, 2018). With this in mind, the education system has to be sensitive to local realities, that of students as well as teachers, and adapt accordingly. The reality is that the curriculums in many developing countries are designed for the elite, not the average child living in the village (Banerjee & Duflo, 2011). With this in mind, it is important to explore the potential benefits of public-private partnerships (Hilson, 2012). There is huge potential for a partnership between the mining industry and government to improve education standards in the country. However, this needs to

take the form of not only financial support, but in curriculum reform processes by using the resources at their disposal (Le Fanu, 2013).

International organisations and foreign aid have dominated the agenda with regards to PNG national education curriculum and policy-making, largely at the expense of local input (Crossley, 1992). Papua New Guinea's continued reliance on funding to support the education system and development strategies means control continues to be held by donor countries and agencies (Crossley, 1992; Hayward-Jones, 2016).

Such a relationship has it's roots in colonial attitudes, whereby the cultural values of Western, dominant, countries are perceived as superior and undermine the cultural values of non-industrial countries (Ryan, 2008). As writes Ryan (2008, p.673), "some aid organisations in Papua New Guinea expect passive implementation of their policies and this is consistent with neo-colonial attitudes". Despite significant funding and large-scale professional input, attempts to reform PNG's education system have largely failed (Guthrie, 2012). One recent attempt at education reform has been to move from PNG's largely formalistic style of teaching to a Western-model, child centred learning model. This has been without acknowledgement of the cultural and historical role of traditional, teacher centred pedagogy in the transmission of knowledge from teacher to student (Guthrie, 2012). In PNG, the cultural context is highly dominated by formalism, which is consistent with the cultural paradigm that existed before European colonialism. And it can be argued, this continues today in most village settings, whereby customary obligations, or *kastom,* and knowledge continue to be passed down in a unidirectional fashion with teacher as custodian and learner as the receiver.

In recent years, the declining economic situation of Papua New Guinea has had far reaching and dire implications for the education and health sectors. The pressures of globalization and the move to an economy of growth, from an economic policy of stability has left the country "entrapped in a debt cycle from which it will be difficult to break free" (Papoutsaki, & Rooney, 2006, p.671). Lack of employment opportunities is widely blamed as one of the reasons for the high crime rates in the

country. This can be said to be a result of an inappropriate national curriculum that perpetuates colonially introduced ideas preparing young people for jobs that don't exist (Goddard, 1995). This combination of a weak institutional government, lack of spending on public services such as education, and a serious law and order problem as well as difficult geographical terrain have lead to a demise in the provision and quality of public service delivery.

It is clear that the country has not yet found an educational model that best suits its needs (Papoutsaki & Rooney, 2006). Though it is clear that Papua New Guinea needs to capitalise on the strengths that it does have, and rather than seeing it's formalistic style of education as a barrier to development, recognise that it is imbedded in the culture of the country. As writes Douglas (2017, p.11), 'Learning that is grounded in culture is meaningful and representative of the learners identities'.

3.6 Education Provision in New Ireland Province

In 2012, the New Ireland Provincial Administration announced that they would be moving towards a PPP approach to education to provide pathways to higher levels of education through the establishment of colleges that would be affiliated to current universities (Emtv, 2020). A majority of the funds for the resourcing of these colleges are derived from the provincial budget that relies heavily on the Lihir Gold Mine, at around PGK 25 million per annum[1] (Loop PNG, 2019) since the Lihir Gold Mine operations commenced has been paid to the New Ireland Provincial Government, as a result of Local Level Agreements highlighted by Gilberthorpe & Banks (2012) these funds have been allocated to various sectors in the provincial development budget. As mentioned in section 2.3, whilst the Mines are providing much needed financial resources the true measure of a successful PPP hasn't been realised as the government has been the initiator without the involvement of the Mining Company. A significant challenge for the Province will be the governance, capacity and a capability of the implementation arrangements for the new policy initiative.

[1] Approximately NZD$11,223,000 as of June 2020

3.7 Work Ready Institute: Philosophy, Vision and the Definition of Success

In discussions with a senior manager in the Newcrest Business Leadership Team (BLT), it was ascertained that as part of the business planning and review process, the BLT questioned the effectiveness of the Lihir Resource Centre. Part of the questioning was driven by recent community grievances and community incidents. For example, in 2014 and 2015 the landholders placed a *gorgor* on multiple locations within the mine lease areas that resulted in a stop of production. With that in mind it is within the context of this business review that the HR manager was tasked with developing a solution concerning ongoing inequalities within the youth population and the need to develop a talent pipeline whereby the company could work with the LLG and the Lihir Mining Landowners Association (LMALA) to identify and assess employment opportunities for local Lihirian youths.

In those discussions, the BLT were very clear on their role that the new centre was not to take the role of the Local Level Government (LLG) in terms of education. Therefore, the decision was made to do away with the current FODE program model, particularly as the NLLG (Niamarmar Local Level Government) was already running a centre in Londolovit town offering a FODE program.

The current model of the WRI is part of a talent pipeline developed by Newcrest to meet its skilled labour needs. The overarching aim is to provide trainees with basic skills to increase their employability to eventually take up positions with NML. The WRI has been developed into its current model between 2017-2020 in response to requirements to fulfil contractual obligations as stipulated in the Employment, Training and Development Plan, one of a number of plans that are required under the company's Mine Development Contract. Under this contract, the company is required to report to the government on employment figures, including those of local Lihirians. The WRI program has been developed in response to this requirement, as well as the business case that developing potential trainees locally will save costs by fulfilling positions locally with skilled and knowledgeable workers.

When seeking new trainees, the WRI seeks applicants for the programs via advertisements, word of mouth, connections through the institute building itself and via the Community Relations department. Depending on the department the program was specifically tailored for, applicants would have to hold either a minimum Year 10 or Year 12 leaver's certificate. They would also have to pass a psychometric test. And most importantly, the applicant must be Lihirian on their mother's side, defined as Category 1 by the Community Relations Department. This is to satisfy requirements as per the mine's Mine Development Contract, as well as the mine's social responsibility.

The graduate from this program has the employability skills in place to have a high chance of employment in the work market. From a monitoring and evaluations perspective the outputs of the program, such as the number of applicants change year in and year out depending on the labour force requirements within the local market. For example, should Newcrest require more of the graduates then a request is made to the WRI for more applicants. The outcome is difficult to measure because varying individuals spoken with have given various views on what the outcome is. For example, in speaking with HR professionals in the business, the outcome is securing employment with NML, however in speaking with the community relations department, the outcome is employment either in the local market or outside of Lihir in the PNG market. Securing employment and improving their family, clan and community situation.

Lastly, the definition of success, as defined by the WRI coordinator, is a graduate who has successfully completed the program and who has then has gone on to a traineeship or employment within the company. The definition of success, as defined by the WRI trainees is attaining employment within the company upon graduation.

3.8 Work Ready Institute: Courses, Staff and Funding

The WRI is owned and operated by Newcrest Mining Ltd. and is wholly funded by NML. The Institute falls under the Human Resources department, and as such is overseen by the Human Resources manager. At the WRI officers run the day-to-day

operations along with the coordinator of educational services, who then reports to the Training and Development coordinator who ultimately reports to the HR manager. A small staff comprising of five teachers, and the coordinator of educational services run the WRI. The Institute has two classrooms as well as a computer room, library and a small science laboratory.

The Work Ready program runs for 13 weeks including 4 weeks of job experience in the different departments in Newcrest – Lihir. There have been 106 graduates go through the program over the three years it has been running. Trainees in this program are on a fixed term contract for 13 weeks. During these 13 weeks, the programme covers such skills as functional literacy, numeracy and computer skills, work ready behaviours and skills – such as time management, and safety amongst other skills. These programmes offer trainees the basic skills needed in order to access entry level employment opportunities. Upon successful completion of the 13 weeks program, the trainees may be considered for a 12 months traineeship within NML departments. The Institute coordinates and monitors all aspects of the programme, maintaining close liaisons with the departmental managers, supervisors, coaches and other relevant personnel. The Work Ready program runs once a year with Lihirian applicants between the ages of 18-30 invited to apply directly to the WRI. Selection criteria include: ideally Grade 10 certificate minimum; medically fit; clean police record; and willing to work weekends. Trainees at the WRI are charged no fees and are provided with course materials, a uniform, lunch and transport for the duration of the 13 weeks of onsite training. In addition, trainees receive 200 kina per fortnight as an allowance to help cover costs at home.

The WRI program, established in 2017, was initially planned with the intention of preparing trainees as generalists to work in any of the Newcrest departments seeking low-level employees. However, with a change of management in HR came a change in direction and staff at the WRI were instructed to create programs specific to departments at the mine, such as process plant and mining operations. In collaboration with individual departments, these programs were tailored to the identified needs specific to those fields in order to produce graduates who could

then go on to work in those areas. This would also affect the recruitment process, with applicants going through a series of examinations to identify them as holding the necessary base skill sets, as defined by the department seeking employees, required for acceptance to begin the program.

3.9 Conclusion

In conclusion, understanding the colonial and postcolonial history of Papua New Guinea sets the stage for really understanding the ways in which the current education system have struggled to find a model that suits the unique cultural and geographical nature of PNG. While great strides have been made in PNG towards providing quality basic education for all, the provision of quality education in Papua New Guinea remains a challenge for the country, who failed to achieve the target of Universal Primary Education in line with MDG 2 by 2015 (Walton & Davda, 2019). There are a number of barriers, which continue to inhibit progress in the education system, however, through public private partnerships and effective leadership the standard of education in PNG can improve with many positive development outcomes. This has set the tone for the development of the WRI in its current model, which seeks to develop the local population by creating pathways to training and formal employment opportunities.

4 Research Findings

4.1 Interview Results

This chapter discusses some of the key research findings that came about as a result of interviews undertaken with five former trainees at the WRI. These results are organised into six categories below: eligibility and family profile; contextual barriers to education success; educational background; obstacles to success at the Work Ready Institute; Aspirations for the Future post Work Ready Institute; The effect of the mine's training and development initiatives on Lihir Group of Islands. Interview questions can be found in Appendix 1 and all interview transcripts can be found in Appendix 2.

4.2 Eligibility and Family Profile

All of the interviewees had either both parents or just one parent, from Lihir, satisfying the requirement for applicants at the WRI to be category 1 or 2. All respondents were aged between 24-28 years old.

4.3 Contextual barriers to educational success

From the pool of respondents, females were more likely to have commitments in the home that made it more difficult for them to leave the home for studies. While one of the interviewees indicated that while she was doing her studies at the WRI she was not expected to do work at the house, due to the long hours she spent away from home, it was still apparent that females carry a heavier burden than males when it comes to work at the house. One of the female respondents was doing work in the family trade store in the evenings after returning from the WRI.

Only two of the interviewees had access to some electricity in their home. As is the case for the vast majority of residents at Lihir, most of the trainees at the WRI would have no electricity at their homes. The company provides electricity for a portion of the villages on the Eastern side due to a Local Level Agreement. The rest of the main island of Niolam and the outer three islands within the Lihir Group rely on off grid power solutions such as solar.

All trainees at the WRI have access to Newcrest transport buses to get to and from the WRI, which is located at Marahun, just above Londolovit town (See Table 3 – Detailed map of Lihir Group of Islands). Depending on where on the island the trainee may be from would determine how long and how difficult their journey to the WRI might be. Trainees located on the Western side of the island have a much more difficult journey that could take them upwards of 6 hours round trip each day. One interviewee whose home is located on the Western side reported leaving Marahun at 4.30pm each day and sometimes not arriving home until 7pm after having left in the morning between 4 and 5am. This is because the road is only sealed from Zuen to Palie, essentially the Eastern side of the island only, a development only completed in the last five years as a result of a Local Level Agreement. Despite the challenges of lack of infrastructure, all interviewees mentioned that they were able to consistently attend the WRI program.

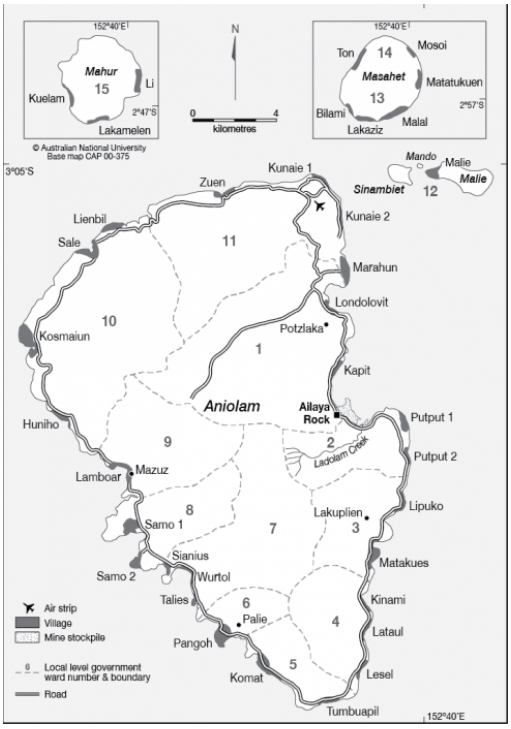

Figure 3 Detailed map of Lihir Group of Islands (Australian National University)

4.4 Educational background

All interviewees had attended Lihir Secondary School, and all but one had completed Year 10. Based on this sample, this indicates that the outputs from the education

system as far as Lihirian children completing primary school and going on to Secondary School, is working effectively. However, this data may be skewed as one of the criteria for applicants at the WRI is to ideally have obtained a minimum Year 10 certificate. The interviewees continue to live at Lihir and had lived there for either all of their lives, or for a considerable portion. All but one of the interviewees came from a home where at least one parent was a university graduate, indicating a high level of parental influence and importance placed on education in their homes.

4.5 Obstacles to success at the Work Ready Institute

The majority of the questions focused around identifying barriers and opportunities for the WRI program. From an output perspective for the WRI it seemed to be meeting its objectives in terms of the procurement of applicants and eventual successful graduation of those applicants. As long as the mine is profitable the successful applicant is likely to secure employment.

From the interviewees spoken to, none identified any issues with the program itself and all were able to successfully complete the WRI program of study.

All interviewees reflected positively on their experience at the WRI and responded that they would recommend the program to others. This is because they all felt that they had gained invaluable skills and learned positive behaviours throughout the course that they have taken away with them. Specifically, all interviewees reflected that they had learned to communicate more effectively with others and now found it much easier to speak in public, particularly in front of superiors. “When I go to work ready I learn so many things. I used to… I cannot talk in front of people. I used to be shy. But when I go to WRI can stand in front and talk in front of people I can make comments with others, I can talk to them…. I got a lot of confidence”, reflected one interviewee. Other skills, such as time management and other work behaviours are considered beneficial. The confidence gained from this has meant that these trainees feel much better prepared for seeking out employment opportunities. Interestingly, one interviewee reflected that the skills gained at the WRI were a departure from traditional village behaviours to work behaviours. “Work ready take

us from the lifestyle of living at home so when we go to WR we change the traditional culture to the modern culture. We used to stay at home but when we go to WR most of us we change those behaviours at home to go to WR we leave the cultural behaviours and move on to the new behaviours of the work place."

4.6 Aspirations for the Future post Work Ready Institute

All interviewees had aspirations for employment when embarking on the training program at the WRI. A clear expectation of the interviewees was that completing the WRI program would eventually lead to employment with Newcrest.

While only one of the interviewees had secured full employment, all of those spoken with highlighted their satisfaction with the program. One interviewee spoke of frustration in not having secured any traineeship after almost a year of waiting. Most of the respondents appeared to patiently be waiting and believed that after the Covid-19 lockdown period that opportunities would then present themselves and they would be contacted for traineeships.

4.7 The Effect of the mine's training and development initiatives on Lihir Group of Islands

Two of the respondents stated that they felt Lihirians needed access to further studies after secondary school in order to create more job opportunities for Lihirian people and improve the outcomes for the island upon closure of the mine. One interviewee reflected that Lihirians were perhaps not educated in how to manage their income and this would create a situation where people would return to the village life of pre-mine days, once the mine came to an eventual close. She states, "I think most of the people at Lihir will finish back like what we used to live in the past. Because nowadays I see people spending money, they don't think of their future".

The questions asked were focused on Newcrest's role in providing educational and employment opportunities at Lihir, which influenced the responses. That said, none of the respondents appeared to have similar expectations of the government's role in providing for these opportunities.

4.8 Discussion in response to Research Questions

Question 1: What is the measure of *success* as determined by the WRI, and by the trainees?

All trainees interviewed expressed a belief that graduating from the WRI program was a measure of success. Completion of the program and full attendance were seen as successful outcomes. However, in addition, all interviewees were under the understanding that to go on to traineeships and employment was also part of the success criteria of the WRI. All interviewees expressed some frustration in waiting for employment opportunities that had not eventuated. This was understood to be a shortcoming of the WRI in not providing for these continued opportunities, but also a feeling that Newcrest had not fulfilled its obligations. This was compounded by the lockdown happening at Lihir in 2020 due to Covid-19 that restricted movements and ensured all non-essential work was halted.

Question 2: What are the obstacles that trainees face in achieving this success?

All of the trainees shared that they did not feel they experienced any major obstacles to successfully completing the program of study at the WRI. While some had difficulties traveling to and from the WRI each day depending on where on the island they were living, all trainees I spoke with were able to travel using Newcrest transport and had near perfect attendance rates. There did not appear to be any difference between males and females in their ability to complete the WRI program, despite having different responsibilities in the home. One of the females interviewed spoke of how she was relieved of her home responsibilities during the time she was partaking in the WRI program due to the amount of time she had to be away from home each day. Another female spoke of her continued work in the family's trade store in the evenings, though she lived closer to the WRI centre and as such had more free time in the evenings than those interviewees who had to travel further. Despite the answers given during these interviews there did appear to be a difference between the genders in terms of obstacles to success. Though

responsibilities were likely reduced for the females, it was apparent to me that the males did not have any responsibilities. The interviewee from the West, more isolated, side of the island shared that they live a much more subsistence style of living in that remote area and that gardening is a daily reality of life. This was more so than those who were living on the East of the island who were more connected to the main town of Londolovit and "do not do gardening seriously".

Despite the intensity of *kastom* obligations in the Lihir group of islands, such as an intensification of customary mortuary feasting (Bainton, 2010), interviewees expressed that they did not feel *kastom* obligations were an obstacle or distraction from their studies at the WRI. And despite my initial presumptions, there did not appear to be a significant difference between males and females in their identification of obstacles to their studies.

Question 3: How can the private sector effectively contribute towards sustainable development goals, in particular education and training in Lihir, PNG?

Most importantly, the role of the WRI should be very clear, in that the WRI cannot take the role of government in providing educational opportunities. Through discussions with the interviewees, it was apparent that Lihirians feel that Newcrest should be playing a key role in improving educational standards on Lihir Island. In terms of further education, it was expressed that Newcrest should be sponsoring talented young graduates from the Secondary School to attend further studies around the country.

In terms of the future and the reality of eventual mine closure, interviewees expressed that "Newcrest have responsibility for us they thinking about the mine close and if they have concern to us they will send some students for further studies so when the mine close we have some place where we can benefit on it".

4.9 Limitations to the study

There are some limitations that must be acknowledged in this study including limitations of the data collected and methodological challenges. Analysis of the

mining companies' role in improving educational outcomes in PNG was limited by using information from only one mining company in the country. The scope of this research project has limited the study to only one specific mine in the country, while there are various other mines that are doing work in partnering with the education department and organisations.

The most important limitation to this study has been an inability to stick to the initial schedule for the undertaking of this fieldwork. The fieldwork was pushed back by five months due to unforeseen circumstances. In Papua New Guinea, people tend to change their phone numbers quite frequently as it has only been in the last few years that it has been possible to pay to get your old phone number back in the event that an old sim card is lost or damaged. From an initial list of 20 phone numbers supplied to me in mid 2019 by the coordinator at the WRI, only three numbers worked in April 2020. This put considerable pressure on those three interviews to try and get as much depth and quality of responses as possible. This inability to work to the original schedule was due to family commitments, and meant that my research paper began in 2017 with an initial Research Design course and didn't finish until 2020. During this time, the WRI went through various models and modes of instruction as well as several changes in management. Unfortunately, this also meant that my personal point of contact at the WRI, the coordinator, had resigned and left the company by the time I was ready to do my fieldwork interviews and collate data.

Analysing the responses of a very small pool of interviews has been very limiting to the scope of this research. By interviewing only 5 trainees, this contributes to a distortion of the results and perception of whether the WRI is meeting it's own success criteria. Another limitation to this small pool of interviewees is that all those I spoke with had successfully completed the program of study at the WRI. There remains opportunity for further investigation by including interviews with trainees who had not completed their studies. Also, due to staffing issues at the WRI during the time of my fieldwork, I was unable to interview any current staff members to

reflect on their impressions of the program and where it could improve in order to better meet it's own success criteria.

The research for this project was first designed on the premise that I lived within walking distance of the WRI, and this formed the basis of my research proposal. However, very suddenly my own living arrangements changed drastically and I moved to Australia with my family. This created some challenges for undertaking this research. I had to redesign my fieldwork to be based on telephone interviews, which has difficulties from a communication perspective. During the phone interviews I did find that due to a language barrier I did have to reword a lot of my interview questions which resulted in more closed answers and less depth than I was hoping for. However, more than this, my inability to be physically present at the WRI created great difficulties in gathering documents and information from the WRI itself. When speaking face to face, and physically presenting myself at the centre it was much easier to get responses and get hold of the information that I required. I found that emailing elicited much slower responses and it became very difficult to get a wealth of information.

Lastly, like many other researchers, I faced additional challenges during the Covid-19 lockdown period during the first half of 2020. This very exceptional and unprecedented situation meant that PNG was closed off from international and domestic travel. Lihir Island was in lockdown and all non-essential staff were flown off the island. Only three Human Resources officers remained on-site, and the WRI was shut down. It was very difficult to get hold of key data and phone numbers to contact former trainees for the purposes of interviews. Therefore, this research project is noticeably lacking in key pieces of data relating to traineeship data and employment data as pertaining to former trainees at the WRI.

4.10 Conclusion

In conclusion, when I went into this research and devised my questions that I would ask interviewees I had a clear idea of the answers I expected to hear. I had a preconceived notion that the trainees would have difficulties in completing the

program for various reasons, including family commitments, *kastom* commitments and general self-motivation. This was a result of my own personal assumptions of Lihirians and the little that I knew of the complex social and customary practices of the Lihirians. And it was also based on my initial research design, which had been based on the Lihir Resource Centre, where it had been identified that students struggled to complete their studies. It was, therefore, a surprise to find that the trainees at the WRI did not feel that they had obstacles to overcome in finishing the program of study. And despite only one interviewee having secured employment after completing the program, all those I spoke to felt that the program was successful and that they would recommend it to others.

Certainly, there are many limitations to this study and it would be remiss to make any strong conclusions from the very small sample that this research covered. From discussions with a staff member at the WRI as well as interviewees, many trainees from the WRI have gone on to more formal traineeships and formal employment as a result of their participation in the WRI program. And while I was unable to quantify this against hard data, the general feeling has been that the WRI has been successful. However, there remains much room for improvement and development of the program in order to ensure it continues to service the needs of the community and encourage growth and development for the local youth.

5 Discussion and Conclusion

The purpose of this research is to explore how the private sector, in this case the mining company Newcrest Mining Ltd., can effectively contribute to and promote the public education sector in PNG. The purpose of this final chapter is to present an amalgamation of the findings of the research, draw conclusions from these findings and to offer recommendations to the Work Ready Institute on how the programs offered at the centre can be improved or enhanced to better address the needs of the Lihirian community it aspires to service as well as offer implications for further research.

5.1 Recommendations for the Work Ready Institute

Should there be an opportunity to review the program design at the WRI the company's intentions should be clearly established. The intentions should set out the parameters and the role of the company more broadly within Lihir Island in terms of sustainable development. Some of these intentions could be adopted from its sustainable development and social performance policies.

Findings indicated that success was based upon securing employment. If this is a measure of success, than a recommendation would then be the periodic labour assessments should be done for planning purposes to understand current and future labour requirements within the local and regional economy.

Newcrest may wish to consider identifying outcomes from the WRI program and not just outputs, for example household social impact monitoring and evaluation may be considered annually for the applicants. Outcomes could include any skills, knowledge and attitude shifts in the applicant and how they might translate into broader community capacity and capability uplift. Thus, a measure of an impact that is beyond just output.

Identifying a clear definition of the success criteria for the program and ensuring that all applicants understand this is very important when seeking to align expectations of all parties. It is clear from the interviews conducted that the expectations of

trainees and the WRI itself were not in sync with one another. This can result in further lowering on the reputation of the WRI within the community and may mean in future that fewer talented applicants come forward for programs in the future if there is a feeling that the program does not result in tangible benefits.

Expanding the reach of the program to include applicants who fall outside of category 1, Lihirian through the mothers line, to include not only those category 2 applicants who are Lihirian through either mother or father, but also category 3 applicants who are from New Ireland would increase the scope and impact of the Work Ready Institute. By increasing the pool of applicants, the WRI has a greater opportunity for creating a quality pipeline of workers to go on to traineeships and employment. This in turn would increase the profile of the WRI to make the centre a place for management in all departments of the operation to look to when seeking a local supply of low-level employees. However, there is a legal requirement for the mining company as part of its Mine Development Contract and Training & Development Plan to preferentially select category 1, 2, 3 and 4 in that order.

In my discussions with the former superintendent for the social and impact monitoring section of NML, he explained that Newcrest has certain policies, standards and guidelines that govern social performance for the business. Within the social performance guidelines there are three guidelines on social baseline assessments, social risk assessments, and social impact monitoring. These three are important in terms of establishing a social baseline prior to any mining activity (Macintyre, Mee & Solomon, 2008). They also provide for the minimum standards for ongoing monitoring and evaluation of the businesses impacts to the local community. These policies, standards and guidelines frame the Corporate Social Responsibility for the business. Further discussions provided an explanation of the processes that are in place that conform to the guidelines by elaborating on the monitoring and evaluation process for the Work Ready Institute. The overall process of monitoring and evaluation is not being carried out for the Work Ready Institute due to operational needs at the mine taking precedence. A clear direction forward for the Work Ready Institute would be to carry out monitoring and evaluation

focussing on the outcomes of the WRI. Even before that, it would be important to establish the outcomes clearly as noted in section 3.5.

5.2 Concluding Remarks

The aims of this research were to investigate the obstacles to educational success that exist for students at the Work Ready Institute, a training and education facility administered by NML Lihir, and in understanding these challenges, the second aim was to explore how the mine, the WRI, and the trainees could work together for *better educational outcomes*.

Aim 1: to investigate the obstacles to educational success that exist for students at the Work Ready Institute, a training and education facility administered by NML Lihir.

The many educational barriers identified in the literature available, discussed in chapters 2 and 3 were also noted in the interviews conducted for this research project. For example, a lack of electricity as well as lack of infrastructure overall for those living in the remote Western side of Lihir. If the purpose and intent of education is to produce a labour force for the marketplace like the mining sector, then the institutions responsible for that base talent pool, for example the primary schools and secondary school, need to be engaged more effectively by Newcrest as part of the scope of the company's CSR efforts. Therefore, its role on the island needs to be redefined. For the Work Ready Institute the talent pool it selects from is dependent on the effectiveness of the education system. While this was not definitively concluded in the research findings, the shortcomings of the education system at Lihir create a shortage of talent or eligible candidates for the WRI to select from. The company needs to acknowledge that this is an institutional issue and if the objectives of the WRI are to be met, the company needs to work with local institutions to remedy this situation.

The output from the WRI, in terms of the targeted number of annual intakes, were not impacted by any of the identified barriers such as infrastructure. However, the outcome of those successful applicants was largely driven by individual motivations

to overcome those contextual barriers and not a result of the mining company directly addressing those barriers. If this is an insight into individuals who are willing to overcome these barriers, it may be worthwhile for the mining company to consider addressing these barriers to improve the potential talent pool and applicants for the WRI.

Aim 2: understanding these challenges, the second aim was to explore how the mine, the WRI, and the trainees could work together for *better educational outcomes*.

The methodology and interview results did not explicitly achieve Aim 2, however through discussions with a WRI staff member, and general employees within the mine and my own personal knowledge through living at Lihir I have drawn the following two conclusions.

Firstly, in order for the various stakeholder interest groups to address better educational outcomes, each of these interest groups, the government, community and the mining company, must first agree that educational outcomes are of a common interest. Having established their common interest, roles and responsibilities must be framed, defined and resourced. The framing can be through government policy or local level agreements that create shared interest.

Secondly, educational outcomes require sustained effort. This means the stakeholder interest groups must be willing to acknowledge each of their weaknesses, for example local level government capacity and capability shortfalls, and be willing to allow the mining company to step into areas of education that are the responsibility of the state. The mining company must also acknowledge its shortcomings in that its primary focus is one of a bottom line and therefore be willing to identify other partners that it can resource, for example donor agency implementing partners to assist the local government.

5.3 Personal Discussion

It is clear from the results of this study that there are both external and internal factors at play in determining the success of the WRI program. Within the WRI itself there appears to be a lack of clear definition of what it means to be successful within the program. When speaking with a WRI staff member, initially the success criteria was set at gaining formal employment after graduating from the program. However, this was revised to gaining a traineeship, as in fact HR required the WRI to provide trainees for departments. When the former superintendent who had spearheaded the major shift from the Resource Centre model to the Work Ready Institute model, left the company the WRI was left essentially rudderless. This superintendent had a vision for the development of local talent and had long-term work experience at Lihir and understood the local context within a framework of national training and development standards. A high level of turnover in management positions was noted as a source of frustration for WRI staff members tasked with implementing the vision of management for the WRI program.

The relationship between the mine and the community is fragile and has long been the source of much animosity. There remains a lack of trust between these entities, built up over many years due to a lack of fulfilment of commitments made by successive leadership in the business. This includes commitments around education, local Lihirian training and development, as well as a general lack of broad development. Only in recent times following community outreach and disruption of the operations in 2014 and 2015 did the company address outstanding community commitments to improve the quality of life for Lihirians by the sealing of the road over half way around the island. However, that has only occurred in the last four years, as compared to over 22 years of mine operation.

As with any organisation, resources are prioritised. In this case, priority goes to the mine. Over the years, the WRI, had not been given the required attention and resources. Resources include people with the right skills, knowledge and experience and understanding of education, community development or social performance. The WRI is not seen as a traditional part of mining processes, and as such it is not

awarded the attention of other areas such as mine operations and the process plant. The leadership culture of the company places greater importance on the mining and processing aspects of the company, as these are the areas where gold is produced and money is earned. However, without social performance to ensure local communities are in harmony with the mine operations, production can come to a halt losing the company millions of dollars per day.

The key to creating an effective public private partnership that has lasting impact for the education system is to ensure that not only are the success criteria of the program being met, but also that the business case for running the program is seeing positive benefits. If there is no incentive for the company to continue running the program, then there is no guarantee of its continued sponsorship.

5.4 Implications for research and future directions

Depending on what the future holds for the WRI in this post Covid-19 landscape, there is a great deal of potential for further research into the role the mine at Lihir can play in training and development of a local workforce. A successful program at Lihir could have far reaching implications if replicated and rolled out throughout the country. The results of this study show that there is a lot of potential in the WRI program, however it requires committed and reliable support from management with a clear focus of its objectives and outcomes.

By considering both the lenses of CSR as well as a rights-based approach, we essentially debate where responsibility should lie when it comes to developing educational services, particularly in mining-affected communities. There is a clear argument for the government assuming responsibilities for providing basic education opportunities. However, the mining industry has a moral obligation to fill the resourcing gaps where the government is unable to extend services beyond a basic level. In the case of the Work Ready Institute, Newcrest has an opportunity to help those students who have fallen between the cracks and have failed to succeed in the regular, public system and help them to succeed in their employment goals. This is an opportunity to develop the local population and can be seen as an investment in

the company's future if some of those students return to work at the mine. However, it is only through making the WRI as efficient as possible and actually ensuring that students have pathways to success that this can happen. By interviewing students, we can find out first hand what the obstacles to their success are, and how the WRI can better accommodate their needs. Furthermore, there needs to be more engagement with affected communities in order to facilitate more relevant and mutually beneficial social change (Gilberthorpe & Banks, 2012).

There also exists an opportunity to develop this study to look more closely at the gender aspect of obstacles to educational success at Lihir. Lihirian women encounter many barriers to education and participation in the formal economy. Women in matrilineal Lihirian society, are the steward of land titles. In addition, she is responsible for participating in the maintenance of that land title through *kastom*. For example, her role is to garden, harvest and contribute into the *haus boi* (men's house) during a feast. This requires time in the garden, time in *kastom* and there is little time remaining for education. Further study is needed to examine the effect this strong customary role plays in creating obstacles to educational success for women in Lihirian society.

Consistent with the views of Hilson (2012), who argues that there are incentives for companies to proactively pursue Corporate Social Responsibility initiatives, the redesign of the Lihir Resource Centre to the Work Ready Institute was incentivised by two fundamental factors: that the community had shut the mining operations in 2014 and 2015 and therefore impacted on production and profits, secondly that there was a legal requirement for these changes by way of the Lihir Mine Development Contract. This contract stated the need for an annual submission of an employment, training and development plan to the national government. If it were not for the legal and business risk factors as incentives the Lihir Resource Centre may never have been remodelled into the Work Ready Institute. The questions used in the interviews for this research were limiting in that there were only two questions pertaining to training and development. In order to develop this research further, there is a lot of information to be gained from following up on trainees to investigate

not only whether they gained formal employment with Newcrest, but whether they found employment through the many other employers to be found on the island by way of contractors, and indeed throughout the province.

In conclusion, there is much scope to develop this research project to investigate the ways in which the extractive industries have impacted education opportunities in local, affected communities in PNG. This is an area underexplored in academic literature. Through my own interviews, I hope to be able to bring a voice to local people to hear their thoughts and ideas surrounding where responsibility lies in providing access to a basic education, and what can be done to ensure that education leads to a sustainable livelihood in the future. In conducting this research, I hope to highlight not only the broader dilemma of how public-private partnerships can work together to improve educational outcomes for mining affected communities, but also look at the more immediate difficulties which present obstacles to accessing the educational opportunities that exist already. The Work Ready Institute is committed to addressing gaps in the education system and helping more Lihirian and local youths achieve educational success and go on to find employment. However, further research is needed to identify those obstacles to success that exist for the students, and indeed the teachers, in order to develop the Centre into a dynamic place of learning and advancement.

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Appendices

Appendix 1 Questionnaire

Question No.	Question	Intent and purpose
Part A: Eligibility and Family Profile		
Question 1	What is your name?	To ascertain the identity of the person given that the interviews are to be done over the phone. There are number of people on Lihir Island that have the same name. In addition, individuals use different names for formal records and in the village.
Question 2	Where are you from? (if not from Lihir)	The purpose of this question is to identify if the person was Lihirian, part Lihirian or Non-Lihirian. Newcrest Mining Limited have established standards and procedures that ensure that eligible Lihirians are prioritised e.g. Full Lihirian are given more priority then Non-Lihirians at the resource centre.
Question 3	Where are your parents from?	This was important to compliment Question 2 in terms of verifying the individuals as either full or part Lihirian form al eligibility perspective.
Question 4	How long have you lived at Lihir?	The purpose of this question is to determine if the individual and or his family and relatives migrated to Lihir Island due to the benefits provided on Lihir Island e.g. the Work Readiness Institute.
Question 5	How old are you	This is important to determine the age group that is at the Work Readiness Institute and relates to Part C: Educational Background questions.

Question No.	Question	Intent and purpose
Part B: Contextual barriers to educational success		
Question 6	Are your parents working?	The intent of this question is to determine if the individual has role models to motivate them in terms of formal education and formal employment, as opposed to informal education and informal employment.
Question 7	What do they (the parents) do?	The intent of the question is to determine at what level in the organisation or position the individual's role model (as per Question 5) has attained and therefore the motivation for the individual to also want to attain the same level / standard.
Question 8	Where are you living?	The intent of the question is to determine if the individual is living in an area that has services provided for them by the mine or not. The eastern side of the main island of Lihir (Aniolam) has all the services due to local level agreements in place, whilst the western side of the island and the other three outer islands don't have access to services like Power, Water and Sealed roads to access the Work Readiness Institute.
Question 9	Who funds your studies?	The intent of the question is to determine if the individual is paying for themselves or by their parents, relatives or other sources e.g. scholarships. The purpose is to determine if the funding source is a reliable source to cover the costs of the program and who is making the investment in the individual.
Question 10	If you had gained a scholarship would that have helped you finish	The intent of this question is to follow up on Question 8 to determine if a scholarship may have motivated the individual to complete their studies and to get over the

Question No.	Question	Intent and purpose
	your studies?	financial cost / barrier.
Part C: Educational Background		
Question 11	Did you attend Secondary School?	The intent of the question is to determine if the individual had dropped out of High School or made a decision not to pursue Higher Education by completing Grade 11 and 12. The purpose of the question is to understand if the individual had a choice in dropping out or not. The Work Readiness Institute is not a Flexible Open & Distance Education (FODE) Program that helps Papua New Guineans have grade 12 equivalency education and certification through flexible open distance education, if they drop out of Grade 10.
Question 12	To what level did your studies go to?	The intent of this question is to determine if the individual passed Grade 10 or not. The purpose is to understand if the person joined the Work Readiness Institute because they had dropped out of the higher education pathway or not.
Question 13	Why were you able to/not able to achieve success at secondary school?	The intent of the question is to clarify motivational aspects of Question 11 and Question 12 and relates to Part B: Contextual barriers to educational success. The purpose of the question is to make sure that the individual has chosen the work readiness institute in terms of employment pathways and not a higher

Question No.	Question	Intent and purpose
		education pathway that a FODE Program offers.
Part D: Obstacles to success at the Work Readiness Institute		
Question 14	How do you find the study programs on offer at the WRI?	The intent of the question is to understand the outcome of the program i.e. the level of performance and therefore effectiveness.
Question 15	What distracts you from your studies at the WRI?	The intent of the question is to understand the outcome of the program i.e. the level of performance and therefore effectiveness from the individual's perspective.
Question 16	Could the space be designed differently to help you stay focused?	The intent of the question is to understand if the space /environment was conducive to their learning. Whilst not evident in the question, the intent was also to ascertain if having make and females together was a obstacle or not.
Question 17	How do you rate the program?	The intent of the question is to understand the outcome of the program i.e. the level of performance and therefore effectiveness from the individual's perspective.
Question 18	Is there any way the delivery of the program could be changed to help you better?	The intent of the question is to understand the outcome of the program i.e. the level of performance and therefore effectiveness from the individual's perspective.
Question 19	What expectations of	This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9.

Question No.	Question	Intent and purpose
	you do your family hold?	
Question 20	What responsibilities do you have in the home?	This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9. The intent was to identify the barriers at home the individual had to overcome in order to complete their program at the WRI.
Question 21	Does this clash with your school obligations?	This was a follow up question to question 20.
Question 22	Is your attendance rate hurting your chances of successfully completing the program?	The intent of the question was to determine the impacts of barriers. This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9.
Question 23	What are some reasons that make it difficult for you to always attend class?	The intent of the question was to determine the impacts of barriers. This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9.
Question 24	Do you have support from home to complete your studies	The intent of the question was to determine the impacts of barriers. This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9.

Question No.	Question	Intent and purpose
	successfully?	
Question 25	Does your family prioritise education?	The intent of the question was to determine the impacts of barriers. This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9.
Question 26	From these choices, what is your biggest obstacle: procrastination (self-motivation), comprehension, other commitments (family, cultural, etc.).	The intent of the question was to determine the impacts of barriers. This question is related to related to Part B: Contextual barriers to educational success, especially 6,7 and 9.
Part E: Aspirations for the future post Work Readiness Institute		
Question 27	After you have completed this course of study, what will you do?	The intent of the question is to understand if the individual has understood the vision, mission and objectives of the WRI. The purpose is to determine if there is an expectation gap between the individual and NML.
Question 28	Would you recommend to others to study at the WRI?	The intent of the question is to determine if the individual was satisfied with the WRI program and therefore their expectations were met by the program.

Question No.	Question	Intent and purpose
Part F: The effect of the mine's training and development initiatives on Lihir Group of islands		
Question 29	What role do you think the mine should play in developing education at Lihir?	The intent of the question is to understand the expectation gap between the individual and the mining company's role in terms of education services on Lihir island, thereby providing insights into the possible nature and quality of the relationship.
Question 30	What do you think is going to happen at Lihir after the mine closure?	The intent of the question is to understand the expectation gap between the individual and the mining company's role in terms of education services on Lihir island post mine closure, thereby providing insights into the possible nature and quality of the relationship in terms of mine closure.
Question 31	How do you feel about employment opportunities on Lihir?	The intent of the question is to understand the individual's expectations of the mining company in terms of employment opportunities and to provide insights into the possible nature of the relationship between the citizens living on Lihir Island and the company.
PART D: Conclusion		
Question 32	Is there anything else you would like to add that hasn't been addressed?	

Appendix 2 Interview Transcripts

Interview #1 (Female)

S- Where do you live?

1-The west coast, the other side. They call it 'little place' Matut. Ward 9. Lihir Island

S- Okay the Western side, so this is where the road is not sealed

1 – Yes. It is very difficult for me. The road condition

S- How old are you?

1 – I am 24 years old

S- Where are you from?

1 – I am mix Lihir and Kavieng

S – Do your parents work?

1 – No. They are farmers

S – What do they farm?

1- Kaukau, yam, mami

S- where do they sell it?

1- At the market in Londolovit

S- When you were studying, who was funding your studies?

1- My father

S- When you were at the WRI, were there fees?

1-No. There were no fees.

S- At your house, do you have electricity?

1- No, we don't get any electricity at our house, because we are living a village life.

S- Do you have access to a generator or something?

1- Only a solar, we are using a solar system to charge our phones and lights

S- Did you go to secondary school?

1- Yes, I went to Lihir Secondary

S- To what level, when did you finish?

1- I finished at grade 10, then I do grade 11 and 12 at the resource centre

S- Did you receive a certificate when you finished grade 12

1- Only the reference. But I didn't get any certificate.

S- Why did you not do grade 11 or 12 at Lihir Secondary School

1- Because maybe of my marks

S- Okay, so your marks were not good enough to stay at the school?

1- Yes

S- And you improved your marks at the R.C.?

1- Yes, I upgrade

S- Do you have brothers and sisters?

1- First born and second born is a female, third is a boy, fourth is a sister. I am the fifth born

S-Did your older sisters and brothers finish secondary school?

1-Yes

S-Do any of them work?

1- Yes, Only my brother is working with Newcrest.

S- And your three sisters do not work?

1- Yes

S- And did your older brother, did he do further study after secondary school?

1- Yes, he went through Madang tech. He got a degree or diploma I don't know. Then he went back to Lihir and he got a job with Newcrest.

S- And did your mother and father finish secondary school?

1- Yes

S- And did they do any further studies?

1- No, they just finished grade 10.

S- And your older brother studied. How did he get the money to pay for his studies?

1- Through my father

S-Did you complete the whole program at the WRI?

1- Yes, I completed the 13 weeks and I got the certificate of the work ready

S- When was this?

1- I did it last year. I finished in July 25 I graduated.

S- How did you find the program

1- Through Lynna Joel at the R.C.

S- Was it a good program?

1- Yes, very good. The program was good. We learned what is at the process plant, how to work, communication, be on time. The program is good.

S- and what distractions did you have when you were studying

1- I don't think so.

S- was there anything that could have helped you to focus better?

1- I am very happy with how work ready helped me. Through this program I can go and work in the Newcrest. I am happy with work ready.

S- did your family have expectations when you went to do your studies?

1- Yes, they were really happy. They expect me to go and work to earn some money to them also.

S- what responsibilities do you have in your home?

1- my responsibility is to help my father who is old and I'm going to buy my school fees for my little sister and brother.

S- do your responsibilities in your home make it more difficult for you to study?

1- Yes, sometimes it can disturb me from my studies so, like, here in Lihir all of us in Lihir in some places they – like for example in town the people living there sometimes they work in the garden, sometimes they stay but they don't do gardening seriously. Us at the western side, we normally do this gardening every day to earn money. Make gardening to earn money. Sometimes I get a bit tired. It is a lot of work. Morning 6 til 6.

S- When you were at the WRI were you able to go to the WRI and you have to come home and do gardening or cooking?

1- No. When I was at the WRI I did not go back and do any gardening or any work at the house. I left the house at 4 or 5 and back home at 7 because we are at the western side. When we are at Marahun and we go to the western side we leave at 4.30 from Marahun and we get home maybe at 7 we get home to the western side. Because of the road condition. Sometimes the bus drop the workers at the big river

at Wartul and we have to follow the road to the west coast by walking if the river is too high.

S- how far is it to walk from there?

1- maybe 30 minutes. Depend on walking, if you are fast you can walk in 30 minutes. If slow, 1 hour.

S- So you go on the Newcrest bus from Marahun?

1- Yes.

S- so you thought the program was good. Is there any way you can suggest how it could be changed to make it better?

1- People like me, I don't work yet. I am waiting for them to report me to the work and I think the work ready if they get students to go and train them. They will be honest and they will recruit students to go and work at the same time. But now we are living long time, we are waiting, waiting, waiting and now I am still staying at home.

S- So you would like them to be honest, and if they say they are going to help you to get a job you want them to fulfil the commitment?

1- It's taking a long time. Still from last year until now we are staying without job.

S- So right now, would you recommend to others to do the program at the WRI?

1- Yes because I think to me I can still get a job and I like the others too to go join the WR and work for the Newcrest.

S- And what skills did you get from the program?

1- I learn plenty of skills I get in the work ready. Like we go and train the trainers how to work in the finite, and finite mixing. I learn communication, be on time. Like now

we are communicating, I learn in WRI how to talk to each other, how to treat each other. These are skills that we learn. They teach me how to do interviews.

S- What do you think that Newcrest should be doing to make education better at Lihir?

1-I think the mine, Newcrest, can help young Lihirians because many of the grade 10 and grade 12 Lihirians are just in the villages, doing nothing, no job. School leavers we are still doing nothing with no job. So my main thought I think that the Newcrest should help those young Lihirians because to benefit the Lihirians. The mine is on the island.

S- so how do you feel about the job opportunities at Lihir?

1- the job opportunities on Lihir Island I think it is not enough. Low. The company should look through and lots of money they have. Yes, they should help develop the education of the children or they could sponsor them to any university or college to help further their studies.

S- How do you feel about other people from other provinces coming to Lihir?

1-I see them they are coming to here at Lihir, they work and I think that the people, why are those people from the other places can come in here to get a job and earn money for them and yet us in Lihir are doing nothing with no job. They are getting more educated. That's why I think that Newcrest should sponsor some of us. Many of us have no money to go get further studies.

S- What do you think is going to happen at Lihir after the mine is closed?

1- I think that because when the mine will close someday. I hope that if the mine close and if we are ask the Lihirians if the government or the Newcrest have responsibility for us they thinking about the mine close and if they have concern to us they will send some students for further studies so when the mine close we have some place where we can benefit on it.

S- When you did your studies and you did some work placement at the process plant?

1- yes, we did some work placement only at the process plant.

S- so when you are looking for work at the mine, what kind of work are you looking for? What kind of work would you like to do?

1- When I go to the process plant the work that I admire in the process plant is line keeping (pipping?)

S- Do you have anything else that you want to say that I haven't asked you about?

1- No, that is all.

Interview #2 (Female)

S: What is your name?

2: My full name is ***

S: How old are you?

2: I am 28 years old.

S: When did you finish your training at WRI?

2: In July 2019.

S: Where are you from?

2: I'm a mixed parentage Lihir, New Ireland and Manus. My mother is mixed Manus Lihir and my father is from Manus.

S: Where do you live at Lihir?

2: Komant on the South Coast

S:How long have you lived at Lihir?

2: All my life. I was born at Lihir.

S: Are your parents working?

2: My father works for the government and my mum also. They work in Londolovit. My dad is working at Potchlaka for the local level government, and my mum works with the education department.

S: When you were studying at school, who funded your studies?

2: My parents fund my school fees

S: I understand that at the Work Ready Institutes, you didn't pay fees, is that correct?

2: No, they pay for everything. Newcrest paid my allowance and school fees and uniform.

S: Do you have access to electricity at your home? Is this reliable?

2: No, just a generator. But you must buy petrol to work that.

S: Did you attend Secondary School? To what level?

2: Yes, I went until 2009 to year 10

S: Did you do any further study after that?

2: Yes, at the resource centre I upgrade my marks. And til now I complete but I did not receive certificate because there is no Lihir resource centre. It changed to Work Ready Institute.

S: Why were you able to/not able to achieve success at secondary school.

2: Because at that time I was sick. I did not do my study well. I went through an operation. Almost 2 months I stayed at home because of operation appendix.

S: What studies have your parents done?

2: My mother and father complete secondary school. My mum went through Divine Word university and my dad too. And that's why they wanted me to go to university as well.

S: When you went to the WRI, what were you hoping to achieve?

2: When I went to Work Ready I did on job training. I just want to update my skills, to take care of my parents. I want to start a small business. After mine close, I can keep at home and continue with my small business.

S: What do you think is going to happen at Lihir after the mine closure?

2: I think after the mine close, I think most of the people at Lihir will finish back like what we used to live in the past. Because nowadays I see people spending money, they don't think of their future just spend most of the money drinking things and not saving up.

S: Do you think they know how to manage their money?

2: They are not taught how to manage money. That's how I see them. They can use money when they have money, only through credit.

S: How did you find the study programs on offer at the WRI? How was your experience?

2: When I went to work ready I was really enjoy because I met new people and I learn new things. At the house or at home I didn't learn at school. But when I go to work ready I learn so many things. I used to… I cannot talk in front of people. I used to be shy. But when I go to WRI can stand in front and talk in front of people I can make comments with others, I can talk to them. That is something that work ready make me feel. Good. I learn more. I got a lot of confidence.

S: Would you recommend this program to other people?

2: Yes, but now I think this program is closed. It's closed. We are the last work ready institute.

S: What distracted you from your studies at the WRI? What was distracting for you?

2: When I go to the work place just I see some behaviours. Like, I don't want that kind of behaviour. Some of our trainees at work ready they don't have kind of respect.

S: Is there any way that the delivery of that program could have been done differently? That might have been better.

2: Most of us, I think we are doing well. The work ready it was really good for us. Work ready take us from the lifestyle of living at home so when we go to WR we change the traditional culture to the modern culture. We used to stay at home but when we go to WR most of us we change those behaviours at home to go to WR we leave the cultural behaviours and move on to the new behaviours of the work place.

S: What responsibilities do you have in the home? Does this clash with your school obligations?

2: Okay so we have a small business set up at home so when I go to work training at work ready I go and learn things and then I come back home. I used to do at home, like management, but I have a small business so I look after my small business with my parents. I open up on time, most of time I make sure that all of my workers are at work. I have a trade store at home in Komat in my village. Selling food and beer. I help people at home. I go or training and in the evening I go for work in the shop.

S: When you were going for the WRI program, what expectations did your family have of you?

2: My family expect me to go for a job so I can help them to put some of my earnings to help build up the business. They expect me to get a job in the lab at the process plant.

S: is this where you did your work experience?

2: no, I am still waiting. Because of this lockdown we have to wait. Now I'm still at home. All of us, work ready trainees we are still at home.

S: so you had no problems with attendence?

2: My attendance was good and I went every day.

S: Does your family find education important?

2: Yes

S: Do you have brothers and sisters?

2: Yes I have 2 boys and 4 girls.

S: Did they complete secondary school?

2: Yes

S: are any of them working?

2: 3. 1 female she is teaching at elementary school and 2 boys with Newcrest. And my small one is with LBS. And my brother graduated at Divine Word university I think last month. Before the lockdown.

S: From these choices, what is your biggest obstacle: procrastination (self-motivation), comprehension, other commitments (family, cultural, etc.).

2: I think commitments. Sometimes I cannot concentrate in my studies because I have lots of things to do in the home like the shop

S: do cultural commitments sometimes make it difficult to study?

2: no, not really.

S: So now, in the future what are you going to do?

2: in the future I'm going to set up, like one day after my parents go I can take control of everything at my parents' home.

S: so you want to take over the family business but you also want to get a job?
2: just want to live with my small business because all my brothers and sisters are working.

S: so you don't want to get a job with Newcrest?

2: I apply but I am still waiting.

S: if you had the opportunity which would you prefer: stay and work on your business or go and work for Newcrest?

2: Go and work for Newcrest.

S: What role do you think the mine should play in developing education at Lihir?

2: I'm not sure because I don't work with Newcrest. I think that they should send then trainees to go for further studies and come back and work for Newcrest. Like the lab, they should send the workers to go for further studies so they can come back and work to help the locals.

S: How do you feel about employment opportunities on Lihir?

2: I think those young people they need to go for further studies because now they are just getting those grade 8. Those Lihirians they need to go for studies and come back and work. So I think they need to go to work ready institute for training. Because when they get there they don't know how to do safety because they think that they know everything.

S: do you think that there are enough jobs available?

2: Yes, I think so

S: so how do you feel about people coming from other provinces to Lihir to work?

2: People coming from other provinces, for me I feel good because I can learn new things, make friends with them and when they have new skills they can show them to us we can learn the new skills from them.

Interview #3 (Male)

S: What is your name?

3: My name is ****

S: Where are you from?

3: I am from Lihir Island

S: Where do you live at Lihir?

3: I live at Kunaye 2 with my family

S:How long have you lived at Lihir?

3: I am living at Lihir for 24 years. All of my life.

S: Are your parents working?

3: My mother is working at Newcrest, she is working in the community relations department. My father is not working, he is staying at the house and sometimes is taking the boat to Namatanai.

S: When you were studying at school, who funded your studies?

3: My mother and father are funding my school fees when I go to school.

S: Do you have access to electricity at your home? Is this reliable?

3: Sometimes we have electricity in our home. We also are having a generator for charging our things and our small refridgerator.

S: Did you attend Secondary School? To what level?

3: Yes, I went to secondary school until year 12 and I complete my studies there. At Lihir Secondary School.

S: Did you do any study after that?

3: No, after that I was staying at the village and doing fishing and sometimes I go on the boats taking passengers to Namatanai or sometimes Tanga Island.

S: How did you hear about the program at the Work Ready Institute?

3: From my friend. He was applying for the program and he told me about it and I thought that it sounded very good for me. So I put my application at the Work Ready Institute and after I am accepted.

S: What studies have your parents done?

3: My mother attended at Divine Word University and my father he was not going to university. Both of my parents they finished their schooling.

S: Do you have brothers or sisters?

3: Yes, I have two big sisters and one small brother.

S: Did they go to secondary school?

3: Yes, all of my brothers and sisters they went to Lihir Secondary School.

S: How do you find the study programs on offer at the WRI? Were they good?

3: Yes, the programs are very good at the WRI.

S: What skills did you learn?

3: I learn many things. I learn how to speak and communicate well. I learn how to present in front of my peers and talk to some people who are bosses.

S: What was your favourite program at the WRI?

3: I really enjoy to go to the Process Plant and learn on site training. We learn how to do many things there. Learning about safety was very good and it is important.

S: What distracts you from your studies at the WRI?

F: Sometimes I am distracted by the other students. Some of them they are not taking it seriously their learning and they are distracting me by not being serious.

S: What expectations of you do your family hold?

3: My family they want me to get a job with Newcrest to help to bring money home. They want me to get a salary and help.

S: What responsibilities do you have in the home? Does this clash with your school obligations?

3: I have responsitibilty to help my father when he goes on the boats. But if I have a job then I do not need to help because I will be working. When I am at the WRI I do not help in the house, my brothers and sisters can help.

S: How do you rate the program? Is there any way the delivery of the program could be changed to help you better?

3: I think the program is very good. I think that the program could be better if they would give us more opportunity to gain work experience. I would like to work in the mine also, maybe learning to drive the big trucks or digging the rocks.

S: Did your attendence effect your success at the WRI?

3: No, I attended 100%

S: What are some reasons that make it difficult for you to always attend class?

3: Sometimes it is difficult to attend every day if you are feeling tired or unwell. But you must learn discipline and how to be on time.

S: Do you have support from home to complete your studies successfully?

3: My family supported me to go to the WRI.

S: Does your family prioritise education?

3: Yes, my family believes education is very important.

S: From these choices, what is your biggest obstacle: procrastination (self-motivation), comprehension, other commitments (family, cultural, etc.).

3: Sometimes I think it is self-motivation.

S: Now that you have completed this course of study, what will you do next?

3: I am waiting for a job to join the Newcrest. But now we are home and there is no jobs because of the coronavirus. Maybe after it is finished I will get a job.

S: Would you recommend to others to study at the WRI?

3: Yes, it is a very good program and I would recommend to other young people to do this program.

S: What role do you think the mine should play in developing education at Lihir?

3: The company should make all of the schools much better with better teachers so that our children are learning very well. We are having a secondary school but some of the teachers are not so good and there are many students in the classroom and it is difficult to learn. Sometimes we are having 50 students in one class and there is a lot of disturbance so we cannot concentrate.

S: What do you think is going to happen at Lihir after the mine closure?

3: After the mine is closed I think that it will not be good for Lihir. Many people they are not learning how to manage themselves and their money so when the mine is closing they will have no money left. It will be very difficult for people if they are not planning for the future. I don't know what will happen because I think maybe there will be no money for improving the infrastructure.

S: How do you feel about employment opportunities on Lihir?

3: I think that there is not enough employment opportunitites on Lihir. But also, the Lihirians they are many not wanting to work so I think that Newcrest has to give jobs to people who are from the other provinces because if they want to only give jobs to Lihirians then they will find it difficult to find the good workers. That is why the WRI program is good because they are teaching Lihirians to be good workers who can then take the jobs and work at the company.

S: Is there anything else you would like to add that hasn't been addressed?

3: Thank you for asking me these questions.

Interview #4 (Male)

S: What is your name?

4: My name is ********

S: Where are you from?

4: My father is from Madang and my mother is from New Ireland.

S: Where do you live at Lihir?

4: I live at Lipuko

S: How long have you lived at Lihir?

4: For 23 years

S: How old are you?

4: I am 28 years old.

S: Are your parents working?

4: My mother was a teacher before. My father works for Newcrest, he works in the HR department

S: When you were studying at school, who funded your studies?

4: My parents

S: Do you have access to electricity at your home? Is this reliable?

4: No, we don't have electricity. There is electric only to the school so we charge our phones and laptops at the school.

S: Did you attend Secondary School? To what level?

4: Yes, I attended Lihir Secondary School to level 10.

S: What stopped to from completing to level 12?

4: Then I went to Moresby to upgrade my marks.

S: What studies have your parents done?

4: My father he went to university, my mother she studied but I don't know what she did. Maybe she was in the teachers college.

S: Do you have brothers or sisters?

4: Yes, I have 2 brothers and a sister.

S: Did they go to secondary school?

4: Yes, they all went. My one brother and my sister they went to further studies.

S: How do you find the study programs on offer at the WRI?

4: The program at the WRI is very good, we learned many things. I was very inspired at the WRI.

S: What expectations of you do your family hold?

4: My family they expect me to work and bring money.

S: What responsibilities do you have in the home?

4: I am staying with my mother and father in the home. I do some cleaning in the garden, but I don't work in the home because I am working in Newcrest.

S: How do you rate the program?

4: It is a very nice program.

S: How was your attendance rate when you attended the WRI program?

4: I attended all my lessons.

S: What are some reasons that make it difficult for you to always attend class?

4: Nothing.

S: Do you have support from home to complete your studies successfully?

4: Yes, my family they help me.

S: Does your family prioritise education?

4: Yes.

S: From these choices, what is your biggest obstacle: procrastination (self-motivation), comprehension, other commitments (family, cultural, etc.).

4: Sometimes self-motivation because I want to have time for myself. But I have to work.

S: Now that you have completed your WRI program, have you been able to find work?

4: I am working in Newcrest in the Process Plant.

S: Would you recommend to others to study at the WRI?

4: Yes, I would recommend this program. It is a very good program.

S: What role do you think the mine should play in developing education at Lihir?

4: The mine it should be helping these students to finish their certificate in the school. Sometimes it is very difficult because there are many students in the class and if you don't understand something it is difficult because the teacher is only one and there are many students. They can't take the time to help everyone.

S: What do you think is going to happen at Lihir after the mine closure?

4: I am not sure. I hope that we are going to keep developing and not go back to like we were before.

S: How do you feel about employment opportunities on Lihir?

4: It is good, but you have to work hard. If you are just waiting at the house always then you won't find any work.

S: Is there anything else you would like to add that hasn't been addressed?

4: No, thank you.

Interview #5 (Male)

S: What is your name?

5: My name is **********

S: Where are you from?

5: Lihir Island

S: Where do you live at Lihir?

5: Putput

S: How long have you lived at Lihir?

5: All my life. I was born at Lihir.

S: Are your parents working?

5: My father is a businessman.

S: When you were studying at school, who funded your studies?

5: My father funded my school fees

S: Do you have access to electricity at your home? Is this reliable?

5: Yes we have electricity at our house.

S: Did you attend Secondary School? To what level?

5: Yes, I attended Lihir Secondary School to Year 10

S: Did you do any study after that?

5: I went to to Moresby to study. I got a diploma in IT.

S: What studies have your parents done

5: My father was a teacher. He went to teachers college.

S: Do you have brothers or sisters?

5: Yes. I have 4 brothers and 2 sisters.

S: Did they go to secondary school?

5: Yes, one brother he works for the Community Relations department.

S: How do you find the study programs on offer at the WRI?

5: They were good. I enjoyed.

S: What distracts you from your studies at the WRI?

5: Nothing.

S: What expectations of you do your family hold?

5: That I get a good job and money for the family.

S: What responsibilities do you have in the home?

5: I help in the house and I do some gardening.

S: How do you rate the program? Is there any way the delivery of the program could be changed to help you better?

5: I find the program to be very good. The days are quite long but the workload it was good and we enjoyed learning many things. I found the information very interesting.

S: Were you able to attend every day?

5: Yes, I attended every day. I think maybe I missed one or two days because I was sick. I can't remember.

S: Do you have support from home to complete your studies successfully?

5: Yes

S: Does your family prioritise education?

5: Yes, my family thinks education is very important.

S: From these choices, what is your biggest obstacle: self-motivation, comprehension, other commitments (family, cultural, etc.).

5: Self-motivation. Sometimes I don't want to go to work.

S: After you have completed this course of study, what will you do?

5: I am waiting for a job. I am waiting for an opportunity to come up. Now we are in the lockdown time with coronavirus and everything is closed so we are not having any opportunities. But I am waiting now.

S: Would you recommend to others to study at the WRI?

5: Yes, I would recommend to others.

S: What role do you think the mine should play in developing education at Lihir?

5: They should play a stronger role. Now they are not playing a strong enough role.

S: What do you think is going to happen at Lihir after the mine closure?

5: I worry, I don't know but I am worried.

S: How do you feel about employment opportunities on Lihir?

5: I don't think there are enough employment opportuntites at Lihir for Lihirian people.

S: Is there anything else you would like to add that hasn't been addressed?

5: No, thank you for talking with me.

Interview with WRI staff member

S: What brought you to the job at WRI?

1: That job was advertised for someone to come and look after the resource centre – you know how the RC was run then, and they were looking for experience with education and training. So Craig, at that time, brought me in to change it from the matriculation to a training program to prepare youths to go to work in the mine.

S: How long were you at Lihir

1: 3 years

S: Did you know when you took that job that the plan was to change it from the resource centre to the work ready institute?

1: During the interview I heard that we would change the focus of the program so when I came I worked on how we could change that. So we were both part of the planning for how we could change to the WRI.

S: So when you came to work there, what were you hoping to achieve?

1: I was hoping that the young people who came to the centre would benefit from a further education or going for employment or maybe create a livelihood for themselves. So that was the plan, that was what I was hoping to do.

S: So with the WRI model, with the 13 weeks, what was the success criteria?

1: We changed the whole model to training for a specific role – to get the youths the skills that they need so they could be employed. And we had about 100% employment rate when they graduated.

S: So, gaining employment was the success criteria?

1: Yes, that's it

S: So was that getting actual employment, or was it going on to a traineeship?

1: Okay, let me put it this way, can you say 50% into traineeship, 40% into valid employment

S: Would it be realistic to get employment if you were, like I assume that most of these trainees going through the WRI only have an education up to maybe year 10 or 12. How many jobs at the mine would not require a degree of some sort? So I'm wondering, is it a very realistic goal to go straight from the WRI to employment?

1: I would say 95% successful. When we recruited the second batch, the first batch was a pilot/trial batch, when we recruited the second batch we recruited specifically for a department so process plant said we need a certain number of recruits. So when the department gave us that quota we had a psychometric test, we had to test to see if they had the technical skills that the people in process plant needed and when they passed the test they come to the training. From the training they go directly into process plant. The employer came to us and said we want this many, and we want them to be skilled in this and this and this.

S: so each batch is doing work experience in a different area?

1: in the first one, it was a general one and we had to go looking for the jobs. But after that, when the process plant said we need more, educated people then we asked the departments to give us the quota. You tell us how many traineeship positions you have and we train them for those traineeships.

S: So how many batches did you end up doing?

1: They started in 2017. We did 3 batches, one was for the generalist one. One was for process plant and one was for LTDC. In total we did 3 trainings and had over 64

S: So what was happening between these 3 batches? Because if there were 64 trainees and since 2017, what happened in the time periods between?

1: Yes, so the change of management came. For about 8 months we didn't do anything, we just planned. We did the generalist one, and then when the new management came, the new HR manager came, she stopped that and she told us to

focus in the departments and so we took over 8 months to prepare each departmental modules so we prepared for process plant, we prepared for mining, the two big departments that needed level 1 employees. And then we also had to prepare for those who were going to apprentice. So we took 8 months preparation. And we ran all those tests during that time. And when we had enough trainees we went to the departments and said we found those for you. It took a long time to find the right people to go into each department.

S: And the criteria for those applications, they had to demonstrate skills in those particular areas that you needed?

1: Yes, and they had to have grade 10, so when they went into the mining and process plant grade 10 was sort of the minimum they need grade 12. Then they had to pass the psychometric test that's tailored for each department.

S: And they had to be Lihirian?

1: Yes, that was the kicker. We had to look for the Lihirians and find them. It took us a long time to find the right Lihirians. The dilemma was we had Lihirians, but their mother had to be from Lihir. They had to be a category 1. That was a delay, because we had a lot of Lihirians there but their mothers are from outside Lihir and so they were not considered as category 1 we had to satisfy the category 1 criteria as priority to go to us.

S: And what was that for? Was that for the Mine Development Contract

1: Yes, and also for the localisation and our social responsibility. Felix can tell you all about it, he can give you all the information

S: What were the challenges in setting up the program?

1: The biggest challenge of all was the change in management within the department, because one would come and then they change and then another one would come and we were always like not sure if they were going the meet the demand of the last manager and the next manager comes and he changes the

course. That's the biggest challenge, and identifying Lihirians was the next challenge. Identifying the appropriate and the qualified Lihirians and motivated. And another challenge was the expectations of the community, that was another big one.

S: One of the things that stands out in the interviews I've done is this not aligning of expectations. They talk about waiting to be called to do a traineeship.

1: Yes, again it's about change in management. The new managers come in and say they only want 15 trainees. So what's going to happen to the others? They're still waiting and waiting. The process of recruitment Sophie, the recruitment process in Newcrest is very, very slow. All jobs. That's why they've outsourced recruitment.

S: So were you satisfied with the outcomes at the WRI?

1: I was very satisfied, yes. I was satisfied with the job of having to prepare the candidates for the job. Because that's where my job ends. Before I left the job, I asked them to have someone local because the new management has combined the Work Ready with the International School. So now someone from the school takes care of it. It didn't go down well with me because it is the primary school. It really needed someone with expert knowledge in training and employment. And I left. As soon as they accepted my letter of resignation they replaced me with an expatriate. And then they put him in and I didn't go back because I left for the weekend and then never went back because of the covid. And now nobody has gone back. So I don't know if Work Ready will ever pick up again from where I left. It's no longer WR, it's changed to school to mine. It's going to come under the new framework. School to Mine is a new program to support taking students from year 8, 10 to prepare for working in the mine. It hasn't started yet.

S: So of your 64 students that graduated at WRI, is there any data on how many are working?

1: I can't give you the updated data now, but I know that it is less than half. Because about 25 of them went to Lihir Training, but that is now closed so everyone is back in

the village. In fact I am not sure, it could be only 20% who are working because of the covid.

S: Who would have this data?

1: You have to go back to HR. No one is working at HR right now. All of HR is out, there are only 3 people there. You could contact Ian, would you know Essie? Darius

S: Don't think of this question as a reflection on yourself. But, in the time that the program has been running, do you think that it has been successful?

1: It's been successful. It's a very successful program.

S: What do you think could be done to make it better?

1: If we opened the gates to others apart from Lihirians. That's one. And if we had the current system for moving trainees that have been there for donkeys years to the next level so traineeships would be vacant that would have been better. And because at the end we were told to recruit 50 or 40 for the program. The smaller the number the better the program will be.

S: Do you think that the WRI is sustainable?

1: It is sustainable, very sustainable. Yes. Because we will continue to supply low level employees to the department. But financially, it's funded by Newcrest, but if we were to open the gates to others, not Lihirians then we could charge a fee. Then we would have our own autonomy, financial autonomy we can be able to do a lot more, not just feeding Newcrest.

S: So the last time they got you to get 50 applicants?

1: Yes, for the process plant. We took 50 that was my target.

S: So of those 50, how many went on to traineeships?

1: Because we were feeding the process plant they were put into groups. When I left there were only 12 that were there. And the others are still waiting to go in.

S: so from those trainees you still wouldn't know how many got actual employment.

1: Yes, that's the thing. I was told that as soon as I finish training that's where my buck stops, I have nothing to do with anything. So all information about employment comes from HR. My job is just to train.

S: so really the success criteria at the WRI wouldn't so much be employment, it would be traineeships.

1: You're right. In the first time it was employment, under the new management that came in we changed it to training and getting ready for employment.

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